# Introduction

Thank you for choosing Alta Bates Summit Medical Center for your orthopedic surgery. This handbook was designed to help you, your family and your friends prepare for your upcoming orthopedic surgery, to help you understand what to expect during your hospital stay and your recovery and to help you regain optimal function as quickly as possible. It is important to understand that your surgery and care will be delivered in a standard manner, in compliance with evidenced based best practices, while recognizing that each patient has different and unique needs and your experience will be dependent upon them.

The various chapters in this handbook will highlight specific information that you may find helpful and pertinent to a specific surgical procedure.

Please bring this handbook with you when you attend all preoperative appointments and when you come to the hospital for your surgery.

Every patient's condition is individual and your care will be coordinated carefully to meet your specific needs by a team of surgeons, physicians, nurses, physical therapists (PT's), occupational therapists (OT's) and case managers.

**THANK YOU for the opportunity to serve you! From your Orthopedic Center of Excellence team here at Alta Bates Summit Medical Center we welcome you!**

**Alta Bates Summit Orthopedic Center of Excellence provides a full continuum of services:**

- Preoperative education and medical optimization
- Prehab classes
- Surgery
- Designated orthopedic nursing care on the postoperative floor
- Physical and Occupational Therapy
- Nutritional services
- Imaging services
- Home health services
- Outpatient Services
- Postoperative rehabilitation classes

# Appointments in Preparation for Surgery

**Patient Name:** _____

**Orthopedic Coach's Name:** _____

## Preoperative Appointments:

☐ **Preoperative Clinic Medical Optimization Appointment:**

Date: _____ Time: _____ Location: 3100 Summit St., Ste. 2549 Oakland

Please bring the following completed forms to this appointment:

- ☐ Your Orthopedic Coach
- ☐ Medication List
- ☐ Anesthesia Questionnaire
- ☐ Discharge Planning Questionnaire
- ☐ Sleep Apnea Questionnaire
- ☐ Advanced Directive, if you have one

☐ **Preoperative Appointment With Your Surgeon** (generally about 1 week before surgery)**:**

Date: _____ Time: _____ Location: _____

Make sure that your orthopedic surgeon's office has up-to-date insurance information

☐ **Surgery:** Date: _____ Surgery Time: _____ Arrival Time: _____

**Surgery Location:**

☐ **Alta Bates Campus:** 2450 Ashby Avenue, Berkeley

(1st Floor Surgical Services)

☐ **Summit Campus:** 350 Hawthorne Avenue, Oakland

(Take Elevator A, go to 3rd Floor East, Merritt Pavilion, Surgery Intake)

## Postoperative Appointments:

☐ **Postoperative Appointment with your Surgeon:**

Date: _____ Time: _____ Location: _____

☐ **Postoperative Physical Therapy Appointments** (if ordered by your surgeon)**:**

Date: _____ Time: _____ Location: _____

Date: _____ Time: _____ Location: _____

Date: _____ Time: _____ Location: _____

## Prepare For Your Surgery

Planning for your surgery and having realistic expectations about your recovery period are important.

It is important to remember that although you are in the hospital, you are not sick. This surgery is not being performed on an emergency basis; therefore, you have time to arrange and prepare yourself and your home situation for a successful recovery.

This handbook can be used as a checklist to be completed before your surgery and a reference when you return home from the hospital. Some questions to answer before you are admitted to the hospital for your surgery include the following:

### Select Your Orthopedic Coach:

*Identify who will help you after surgery once you are discharged home?*

We strongly encourage you to designate an Orthopedic Coach who will be able to assist and support you for one to two weeks once you are discharged home from the hospital with activities such as meal preparation, shopping and other tasks that you need assistance with. Your Orthopedic Coach does not need to be a medical professional, it can be a spouse, a domestic partner, an adult child, a relative, a friend or any other responsible person of your choice. Your Orthopedic Coach should attend your preoperative medical optimization appointment at the Preoperative Clinic, at least one physical therapy session in the hospital and be present at the hospital at the time of discharge so that he/she can hear your final discharge instructions and have an opportunity to have any last minutes questions answered. Attending these sessions will enable your Orthopedic Coach to learn the information that is shared with you and therefore be better able to assist you in preparation for your surgery and during your recovery. Your Orthopedic Coach will be one of the most important sources of support and encouragement for you before surgery, during your hospital stay and most importantly when you are discharged home after your surgery. While you are in the hospital, your Orthopedic Coach's name will be written on the white board in your hospital room and we will provide a complimentary parking pass for him/her for the day or two that you are in the hospital.

### Attend All Preoperative Appointments:

*Have You Scheduled Your Preoperative Appointments?*

In the weeks before your surgery you will have at least 2 appointments for final preparation for surgery.

- Surgical Evaluation and medical optimization at the Preoperative Clinic.
- Preoperative appointment with your orthopedic surgeon.
- Optional: Appointment with your Primary Care Physician (PCP) ONLY, if requested by your surgeon.

The team of physicians and practitioners will discuss your individual healthcare needs with your orthopedic surgeon and provide written documentation of surgical clearance.

### Surgical Evaluation at the Preoperative Clinic Appointment:

Your surgeon will refer you to our Preoperative Clinic for preoperative medical optimization and education. The Preoperative Clinic is located at 3100 Summit Street Suite 2549 in Oakland. The Preoperative Clinic will call you to schedule your preoperative appointment after your surgeon's office has scheduled your surgery with the hospital.

This comprehensive appointment will last approximately 2-3 hours and will include a History &

Physical, medical testing such as lab work and/or an EKG, an educational class and a meeting with a case manager to begin the discharge planning process in preparation for your return home after surgery. Based on this evaluation, a determination will be made if any other specialist referrals, such as cardiology, are required before your surgery.

Please read this handbook in its entirety BEFORE attending the Preoperative Clinic appointment.

The role of the Orthopedic Coach begins by having them attend your preoperative appointment at the Preoperative Clinic. **Please bring your Orthopedic Coach and be prepared to spend 2-3 hours at this appointment.**

The preoperative educational class will be held in a group setting with an instructor which will give you and your Orthopedic Coach the opportunity to ask questions and gather more information about any part of your surgical process or recovery. Having all your preoperative needs taken care of at one visit will minimize your travel time, worry and stress.

**Please complete and bring the following to your preoperative appointment at the Preoperative Clinic:**

1. **Completed Medication List or actual bottles of medications you are currently taking.** Please write down the medication name, dose and how often you take each medication. Please include prescription, over-the-counter and herbal medications. You will be instructed on which medications to take and NOT take before your surgery. Some medications such as herbal supplements and anti-inflammatory drugs should be stopped for several days prior to surgery. These medications can thin your blood and cause unnecessary bleeding as well as adverse side effects.
2. **Anesthesia Questionnaire** (mailed to you).
3. **Plans for Discharge Questionnaire** (mailed to you).
4. **Your Advanced Directive** (if you have one). It will be scanned into your hospital medical record.
5. **Sleep Apnea Questionnaire** (mailed to you).

## Preoperative Appointment with your Orthopedic Surgeon:

Your surgeon will discuss the final plans for your surgery and review the risks, benefits and possible complications associated with your surgery. This is an opportunity for you to review the procedure and ask all your final questions before your surgery.

## Complete Dental Work

*Do you need to have any dental work done?*

Any dental work that you need to have done in the near future should be completed before your surgery. Teeth cleanings can be done up to one week before surgery, but more invasive dental work should be completed at least three weeks prior to your surgery.

Following your surgery, it is recommended that you wait 6 months to have any elective dental work including teeth cleanings performed. Please talk to you surgeon for additional instructions.

During dental cleanings, your gums may bleed which allows bacteria to enter your bloodstream. Bacteria are strongly attracted to metal and can travel through your bloodstream to your new joint and cause a joint infection. This is not common; however, it can occur. For this reason, i**f you are having a joint replacement, please tell healthcare providers that you will need antibiotics before any dental work or invasive procedures**.

# Preparing for Your Return Home

## Determine Where You Will Stay:

### *Where will you stay after being discharged from the hospital?*

The majority of patients will return home after surgery, but some patients may choose to temporally stay at the home of their Orthopedic Coach, family member or friend following their discharge from the hospital.

You will meet with a case manager at your Preoperative Clinic appointment who will review your discharge plan with you. (Your surgeon may postpone your surgery until you have secured the needed support for a safe discharge to home, so be sure to bring your Orthopedic Coach to this appointment).

If there is no one available to assist you when you get home, you might need to consider other options such as hiring a private home health aide until you are able to care for yourself.

In the unlikely event that you need skilled nursing facility level care, the case manager can provide you with a list of skilled nursing facilities to choose from. You can choose the facility that works best for you and you are encouraged to look at them in advance of your surgery. You might also want to check with your insurance company to ensure that you have a skilled nursing facility benefit. We work closely with several local skilled nursing facilities to ensure that they are knowledgeable about the expected course of your recovery and collaborate with them on quality outcomes. Most insurance companies do not provide transportation between the hospital and a skilled nursing facility. We encourage you to check with your insurance company preoperatively to determine if transportation is a covered benefit of your insurance plan.

The case management team supports you and your Orthopedic Coach during the hospital stay and helps prepare you for discharge. Case managers are available to discuss discharge options, answer basic insurance questions, and assist in arranging other home care services.

## Prepare Your Home:

### *Is Your Home Safe For Your Return?*

- Remove and store throw rugs to avoid tripping or catching a walker or cane.
- Move all lamp and phone cords out of your walking path.
- Clear clutter from your home that may be in the way when walking.
- Reposition furniture to allow for use of assistive devices, such as walkers, if needed.
- Have stable chairs with armrests available (rolling office chairs are not suitable). Make sure that the chair is high enough to allow you to maintain any precautions that are specific to your surgery.
- If your bedroom is on the upper level of your home, create a sleeping area on the first floor, if possible, for the first couple of weeks especially if you are having surgery on your hip, knee, ankle or spine.
- Place non-skid mats in your shower and/or bathtub if the surface is slippery when wet to prevent falls.
- A commode, shower bench and other assistive devices can improve safety in the home. If needed, plan to purchase these items before surgery.
- Secure handrails on stairs and in shower/tub.
- Check your bed for appropriate height and raise the bed as needed.
- Ensure that you have lamps within easy reach, especially in the bedroom or install night lights.

- Put dishes, bathroom articles and frequently used items where they are easy to reach (generally at waist level).
- Have extra pillows available for appropriate positioning.
- Prepare to manage pets that could be a tripping hazard.

## Meal Planning:

*How will your meals be provided for you when you return home?*

- Move items in the refrigerator from lower shelves to mid-level shelves.
- If you live alone, make meals ahead of time and freeze them, buy nutritious prepared foods that are easy to reheat or are microwaveable, check your local supermarket to see if they have a delivery service or check out online grocery shopping and delivery services such as www.shop.safeway.com.
- You will not likely be able to drive for a few weeks after your surgery (exact duration determined by your surgeon), so make sure you have enough meals prepared or have someone available to do your shopping.
- Make plans for your Orthopedic Coach, friends or helpers to do meal preparation.

## Pets:

*Who will care for your pets?*

- Plan ahead for the care or feeding of your pets while you are in the hospital, and for the first few weeks when you get home.

## Household Chores:

*Who will help with household chores and errands?*

- Make plans for your Orthopedic Coach, friends or helpers to do light housework and laundry.
- You will likely not be able to drive for several weeks after surgery. Arrange to have your Orthopedic Coach, friends or family help you with errands, grocery shopping and getting to doctor appointments. Your surgeon will give you medical clearance to begin driving again following your surgery when it is appropriate.

## Ride to the Hospital:

*Who will drive you to the hospital on the day of the surgery and who will drive you home from the hospital?*

In addition to arranging how you will get to the hospital on the day of your surgery, you will also need to plan a ride home from the hospital when you are discharged. You will not be able to drive yourself home.

If you are having surgery on you hip, knee, ankle or spine and anticipate having difficulty ambulating in the initial postoperative period, consider requesting a temporary Disabled Person Placard. Your surgeon's office can provide you with the temporary DMV placard application if he/she feels that you will benefit from it during your recovery. The application can also be obtained at your local DMV office, at www.dmv.ca.gov or by calling 1-800-777-0133. The placard application must be authorized and signed by your surgeon before returning it to the DMV. The temporary placard may be granted for a maximum of 6 months at the discretion of your surgeon.

## Physical Preparation for Surgery:

*Have you physically prepared yourself for surgery?*

One key aspect of planning for your surgery is preparing yourself physically. Strengthening your muscles is important in order to have a speedy recovery. A stronger lower body will make it easier for you to stand and walk after surgery. If you are having a total hip, knee or ankle replacement or spine surgery, your leg may feel very different after surgery. The exercises listed in this educational binder for the lower body are similar to those that you will be asked to do after surgery. **It would be beneficial for you to practice these exercises before surgery to familiarize yourself with them**.

Strengthening your upper body is also very important. After surgery, your arms are responsible for supporting a great deal of weight that is shifted off the operated joint if you are having a total hip, knee or ankle replacement. A strong upper body will assist with movement in and out of bed and chairs and when using walkers or crutches. If you are having shoulder surgery, your operated arm will be in a sling and you will not be able to use the operated arm for several weeks.

In addition, overall health plays a clear role in the surgical and recovery process. If possible, continue with your walking program before surgery with the goal of gradually increasing the time that you walk to at least 30 minutes at a time. Walking strengthens the heart and circulatory system enabling your body to cope better with the stresses of surgery. If you are not currently doing a walking program, please consult with your doctor or therapist before starting a walking program. Always use any assistive device already prescribed to you and make sure you walk in a safe environment. If you are unable to walk for exercise, consult your physician about other options including water exercise. *See the Joint Replacement Resource section for more information for locations where water therapy is offered.*

If you are already doing exercises specifically prescribed to you by a doctor or therapist, please continue with those exercises.

You may also benefit from our structured Prehab Program. This program is recommended for most patients by your surgeon to improve your cardiovascular fitness, strength and balance before surgery as well as teach you the exercises that you will be asked to do postoperatively. The Prehab therapist will customize a program to meet your individual needs and prepare you for a successful recovery and a safe discharge to home.

**What are patients saying about the Prehab Program?**

*"I'm really glad I did Prehab to help me get in better shape before surgery. It made rehab much easier."*

*"Prehab helped me feel more prepared and recover faster."*

Please talk with your surgeon or the Nurse Practitioner at the Preoperative Clinic to find out if the Prehab Program would be beneficial for you. The Prehab program is most effective if it is initiated at least 4 weeks before surgery, but even 1-2 sessions before surgery can provide you with a great benefit.

## Nutritional Preparation for Surgery:

*Are You Eating Healthy?*

It is important to eat a nutritious diet before and after surgery to help your body heal and prepare you for the rehabilitation process. Every change that you make to improve your nutrition before

surgery will enhance your body's opportunity to successfully recover from surgery. This includes eating foods from all of the food groups and taking a multivitamin with minerals daily. Starting now, we encourage you to eat a well-balanced diet including foods high in fiber, protein, iron, calcium and vitamin C and D.

- **Fiber**
  Fiber assists in normal bowel function. If can be found in fruits, vegetables, cooked dried beans, dried fruit and whole grain products. To help avoid constipation, you will need to drink at least 6-8 cups of water daily before and after your surgery.

- **Protein**
  Protein is a very important building block for muscle and bone. It is found in meat, fish, eggs, poultry, nuts, dairy products, soy products and cooked dried beans. You should plan to have protein at each meal before and after your surgery.

- **Iron**
  Iron helps to produce hemoglobin, a substance found in red blood cells. Hemoglobin helps to carry oxygen to the body's tissues. Without sufficient iron, you may feel weak, tired and irritable. Iron is found in green leafy vegetables like spinach and kale, beans, dried fruits like raisins and apricots. Good sources of dietary iron include, red meat, chicken liver, clams, mussels, oysters, canned sardines and salmon.

- **Calcium**
  Calcium is an important component of bone. In order for your body to absorb calcium, your body also needs Vitamin D. Calcium can be found in milk products, calcium fortified foods, some dark green leafy vegetables and in a pill form. It is recommended for men to get 1000 milligrams of calcium each day and for women to get 1200 milligrams of calcium each day. Please ask your Primary Care Physician (PCP) if he/she recommends you take a calcium supplement in addition to the multivitamin with minerals.

- **Vitamin C**
  Vitamin C is important for wound healing and bone formation. It is found in citrus fruits, green and red peppers, collard greens, broccoli, spinach, strawberries, tomatoes and potatoes. If you take a multivitamin with minerals, it will contain enough vitamin C that you do not need to take an additional vitamin C supplement.

- **Vitamin D**
  Vitamin D is essential for proper wound healing and aides in the fight against infections. Food rich in vitamin D include salmon, swordfish, tuna, egg yolks, Swiss cheese, cod liver oil and fortified drinks such as orange juice or milk. Vitamin D levels can also be increased by spending 15-20 minutes in the sun daily although after the age of 50 your body may not be able to absorb Vitamin

D from the sun as effectively. Vitamin D is also included in most multivitamins. Please ask your Primary Care Physician (PCP) if he/she recommends you take a Vitamin D supplement in addition to the multivitamin with minerals.

- **Calories**
  Food provides calories that the body uses for energy. Surgery increases the body's need for calories. Foods that provide energy include carbohydrates like bread, pasta, rice, cereal, fruit and milk. Fat is another source of energy. Fat is found in oils, spreads, cheese, nuts and meat.

You will likely need to take pain medication following your surgery and all pain medications can be constipating. Plan ahead for methods to decrease constipation. Plan to increase your water intake to at least 6-8 glasses daily (unless your fluids are restricted for medical reasons). Eat plenty of fiber, fruits and vegetables. You may also need a stool softener, laxative or even a Fleets enema to decrease your constipation following surgery. You may want to ask your surgeon for a prescription prior to surgery.

Following anesthesia and while you are taking pain medications you may also experience a decrease in appetite. If you find that your appetite has decreased following surgery, try to eat smaller meals more often rather than three large meals. Remember that your body requires more calories than you normally consume to heal and you also need to drink plenty of water following your surgery.

**Here is an Example of a Nutritious Meal Plan:**

| | |
|---|---|
| Breakfast | Whole wheat toast and peanut butter, raisin bran cereal with low fat milk and orange juice. |
| Lunch | Turkey sandwich on whole wheat bread with lettuce and tomato, cantaloupe, soy milk. |
| Dinner | Grilled steak, baked beans, coleslaw, raw carrot sticks and iced tea. |
| Snack | Fruit yogurt, dried fruit, nuts and fresh fruit |

You will have a lot to think about after surgery. Don't forget that your food choices will make a difference in your recovery rate. Take some time before surgery to plan and prepare some healthy meals for when you return home from the hospital. If your appetite is decreased after surgery while you are still in the hospital, ask to speak with a representative of the food service department to discuss menu options. Remember, your body needs fuel to recover optimally.

## Smoking Cessation:

*Do you smoke? If so, it is time to Quit!*

At Alta Bates Summit Medical Center, we strongly encourage you to stop smoking to improve your health. We are "tobacco-free" at all of our campuses. Smoking is not permitted anywhere on our property, including all indoor and outdoor areas, including the parking garages.

We offer a variety of resources that can help you stop smoking. We've also developed the following information to help you get started and to provide you with the tools you need to quit for good. Smoking has been associated with a higher incidence of negative surgical outcomes such as infection and slower healing.

As soon as you quit using tobacco, you will begin to improve your health and lower your risk of getting a tobacco-related illness. Quitting smoking at any age will increase life expectancy.

**Here's how your body heals after you quit:**

| Time after quitting | Physical Effects |
|---|---|
| 20 minutes | Heart rate and blood pressure return to normal |
| 12 hours | Carbon monoxide level is blood normalizes |
| 2 weeks to 3 months | Circulation improves and lung function increases |
| 1 to 9 months | Coughing and shortness of breath decreases |
| 1 year | Risk of coronary heart disease is half that of a smoker's |
| 5 years | Stroke risk is reduced to that of a nonsmoker |
| 10 years | Lung cancer death is half that of a smoker's. Risk of cancer of the mouth, Throat, esophagus, bladder, cervix and pancreas decrease |
| 15 years | The risk of coronary heart disease is that of a nonsmoker's |

**I want to:** (Check all that apply to you)

- ○ Improve my personal appearance by eliminating stained teeth and fingers, bad breath, chronic coughing and clothing odor. I want my skin to look healthy and young.
- ○ Regain my sense of taste and smell, feel more energized and active and improve my sleep.
- ○ Regain my control of behavior, gain a sense of freedom and not be addicted to cigarettes.
- ○ Reduce health risks, such as heart disease, cancer, impotence, emphysema and chronic bronchitis.
- ○ Avoid having a heart attack and problems breathing.
- ○ Reduce risk to unborn children and provide a healthy environment for children and others living with me.
- ○ Save money.
- ○ Avoid possible injury or upset to others by making them breathe second hand smoke or being burned by cigarettes or ashes.

Other Reasons:

_____

_____

_____

**Tips for Quitting**

Quitting smoking is a very rewarding decision for you, your family and your friends. To help you begin living your life tobacco free, review the following tips for success:

1. Think about your reasons for quitting. Write them down and carry them with you. Read them every day.
2. Choose a good time to quit and set a date. Stick with it. Sign a contract. Announce the date to family and friends who support your decision to become tobacco free.
3. Think about when and why you use tobacco. Do you use tobacco for a pick-me-up? When you're bored? When you're angry, worried or upset? When you're driving? When you're with others who are using tobacco? A couple of weeks before your quit date, wrap your cigarette pack with paper, pencil and a rubber band. When you smoke write down the time of day, how you feel, and how important that cigarette is to you. This can help you identify your reasons for smoking.
4. Have a plan before you quit. If you use tobacco for a pick-me-u, plan to exercise or take a walk instead. When you're bored, plan to call a friend, listen to music, or play with your pet. Just get busy! When you're upset, angry or worried, call a friend, write it down or talk to someone you trust.
5. Think good thoughts. "I will do this". "I'm worth it." "I'm in control." "I'm proud of myself".
6. What if you smoke after quitting? This does not mean you have to give up. Do something now to get back on track. Don't punish yourself. Think about why you smoked and decide what you will do the next time it comes up. You're still a non-smoker.

**Other information**

Talk with your physician, healthcare provider or pharmacist if you have questions or want to discuss alternatives to help you quit smoking, including smoking cessation medication or a referral to a smoking cessation support group.

Alta Bates Summit Medical Center has nicotine replacement therapy available for patients. If you are considering the use of nicotine replacement therapy to reduce withdrawal symptoms as you quit smoking, first ask your doctor if it is a safe option for you.

Nicotine replacement therapy (including prescription medication, patches, gum and lozenges), when combined with group therapy, have been shown to increase the likelihood of quitting.

**Additional Resources**

1. Sutter Health
   www.sutterhealth.org

2. American Lung Association
   800-LUNG-USA
   www.lungusa.com

3. California Smokers Help Line
   800-NO-BUTTS

4. American Cancer Society
   800-ACS-2345
   www.cancer.org

5. www.smokefree.gov

6. www.quitnet.com

7. www.nhsgiveupsmoking.com

8. www.tobaccofreeCA.com

# The Week Before Surgery

## Illness:

*What should you do if you develop a last minute illness?*

If you develop a cold, sore throat, fever or other illness before your operation, call the Preoperative Clinic and your surgeon as soon as possible. It may be necessary to postpone your orthopedic surgery temporarily until you are healthy.

## Showering:

*When should you start showering with the Chlorhexidine Soap?*

Remember to use the Chlorhexidine Soap for 3 consecutive showers (or 5 consecutive showers if you screened MRSA positive), before going to the hospital as directed at the Preoperative Total Joint Replacement and Orthopedic Surgery Patient Education Class.

## Medications:

*Did you stop taking the appropriate medications?*

Don't forget to stop taking any medications that the provider at the Preoperative Clinic instructed you to stop taking.

## Packing Your Bag for Surgery:

Your final preparation for surgery is preparing your bag for the hospital stay. When choosing what to pack and what to leave at home, please remember that you are not sick, but you will be having surgery. Often you will feel better if you dress and freshen up (make-up for women and shaving for men) as soon as you are able following your surgery.

*What should you bring to the hospital?*

- **This education binder.**
- **Clothes**: Bring two sets of casual, loose fitting stretchy clothes. For example, shorts, large sweat pants, and button up shirts. The Occupational Therapist will be able to teach you how to dress yourself after surgery. You will likely be able to start to wear undergarments very soon after your surgery.
- **Shoes:** Bring a pair of closed heeled, supportive, slip on shoes. For example, a loafer or a sneaker type tennis shoe. Remember, if you are having a lower extremity joint replacement, your feet may be swollen after surgery. Do not bring slippers.
- **Toiletries:** Deodorant, etc.
- **Contact Lenses/Glasses:** Contact lenses must be removed before surgery. Please bring an appropriate container and solution to store your contacts in during surgery and/or a case to store your glasses.
- **Hearing Aid(s):** Please bring a labeled container to store your hearing aid(s) and extra batteries.
- **Dentures:** If you wear dentures, you must remove them before your procedure. The nursing staff will place them in a labeled cup. Please remember to bring denture cleaning items.
- **Equipment:** If you have any of the following, label the item with your name and bring it with you to the hospital:
  - a walker
  - adaptive equipment to help you with dressing such as a reacher or sock-aid
  - CPAP or BiPap machine
- **Advanced Directive for Healthcare**
- **Medication List**
- **Orthopedic Coach Checklist**

**Do NOT bring the following:**

- **Medication:** Leave all your medication at home. The hospital will provide all of your home medication to you as needed.
- **Money, credit cards, valuables or jewelry.** If you wish to purchase additional adaptive equipment from the gift shop following your surgery, you may request a family member, a friend or your Orthopedic Coach to bring your money and/or your credit card to you at to the hospital before discharge home.

# The Day Before Surgery

## When to Stop Eating and Drinking:

*When are you supposed to stop eating and drinking before your surgery?*

The Preoperative Clinic will provide you with detailed instructions for when you are to stop eating and drinking before your surgery. You must follow the instructions you are given to avoid having your surgery cancelled.

# Final Checklist Before You Go to the Hospital

- Have you identified your Orthopedic Coach?
- Have you attended the Preoperative Clinic medical optimization appointment?
- Have you identified where you will stay after your discharge home from the hospital?
- Have you completed any dental work that needs to be done in the near future?
- Have you stopped smoking (if applicable)?
- Is your home safe for your return home from the hospital?
- Have you acquired any needed medical equipment?
- Have you been eating a nutritious diet in preparation for surgery?
- Do you have a meal plan in place for when you return home?
- Do you have a plan in place for your pets (if applicable)?
- Are you physically prepared for surgery?
- Are you mentally prepared for surgery?
- Have you identified who will assist you with household chores and errands?
- Have you attended your preoperative appointment with your orthopedic surgeon?
- Have your discussed your discharge plans with your surgeon?
- Do you have all the prescriptions for the medications you will need postoperatively filled and stored in a safe place for your return home?
- Have you stopped any medication that the Preoperative Clinic medical provider instructed you to stop?
- Have you identified who will drive you to the hospital on the day of your surgery?
- Have you confirmed your arrival time for the day of surgery?
- Have you used the Chlorhexidine Soap to shower with for the 3 showers before surgery?
- Have you packed appropriately for the 1-2 day hospital stay?
- Have you completed an Advanced Directive?
- Have all your questions and concerns been answered?

# The Day of Surgery

## Arrival:

### *When should you arrive for surgery?*

On the day of surgery please arrive at the front desk of Surgery Intake 2 hours before your scheduled surgery time. The Preoperative Clinic will give you a preliminary arrival time and your surgeon's office will confirm the arrival time. Specific fasting instructions will have been given to you by your surgeon or the Nurse Practitioner or Anesthesiologist at the Preoperative Clinic.

**Alta Bates Campus**
2450 Ashby Avenue. Berkeley
Refer to maps
(1st Floor Surgical Services)

**Summit Campus**
350 Hawthorne Avenue, Oakland
(Take elevator "C",
go to 3rd Floor East, Surgery Intake)

## After Admission:

### *What happens after arrival?*

After arrival, you will be taken to the Preoperative Holding Area. Your Orthopedic Coach and family may remain with you until you are taken to the operating room.

You will be asked many questions and some questions more than once. This is our system of checks to make sure that we have all the information we need to provide you with the very best care and keep you safe.

An intravenous (IV – a small tube in your arm for fluids) line will be placed before you go to the Operating Room.

An Anesthesiologist will greet you and explain the anesthesia options available to you for your surgery.

The Anesthesiologist and the Operating Room nurse will accompany you to the Operating Room and be with you the entire time you are in the Operating Room, monitoring your vitals and making sure that you are safe.

Your Orthopedic Coach and family may wait in the Surgical Waiting Room or Family Resource Room while you are in surgery. The Operating Room nurse will keep your family updated during the surgery. Your surgeon will meet with your family after surgery is completed, explain the surgical findings and let them know how you are doing.

## After Surgery is Complete:

### *What happens after my surgery is completed in the Recovery Room?*

After your procedure, you will be taken the Recovery Room or Post-Anesthesia Care Unit (PACU). You will still have the IV in your arm, you will have a dressing covering your incision site and you may have a urinary catheter in your bladder, a wound drain at the surgical site and/or an ice pack or ice machine covering your surgical site.

If you have had a knee replacement, you may have a knee immobilizer on your surgical knee that prevents you from bending your knee when you are ambulating. If you have had neck surgery, you may have a neck collar on. If you have had back surgery, you may have a back brace on. If you had a shoulder replacement, your surgical arm will be in a sling.

You may also have TED (support) hose, foot pumps and/or Sequential Compressive Devices (SCD's) on your legs. The SCD's and Foot Pumps intermittently fill with air and gently squeeze your legs or feet to prevent blood from pooling in your legs which could potentially cause blood clots to form. Nurses will also ask you to move your ankles.

During your stay in the Recovery Room (or PACU), you will be closely observed and monitored. The Recovery Room Nurse will check your blood pressure, pulse and respirations every 15 minutes or more as needed. In addition, the nurse will observe your surgical dressings, drainage tubes and intravenous lines.

While in the Recovery Room (or PACU) you will receive oxygen to keep your blood oxygen level up while you are waking up. You may feel very relaxed or slightly groggy immediately following your procedure. However, as you become more alert, you will be encouraged to take deep breaths and cough to clear your lungs. If you have any discomfort, please notify your nurse. Medication is available to help reduce any pain or discomfort you may experience after your surgery.

If you had a regional anesthesia which includes spinals, epidurals and/or nerve blocks, it is normal for you to feel numbness and/or tingling in your leg(s) following surgery for a short time. During that time, you will be monitored and measures will be taken to ensure that you are comfortable and safe.

# The Hospital Stay

## Healthcare Team:

### *Who is Your Orthopedic Healthcare Team?*

Your hospital care involves a number of specialists, each with a unique role in your recovery process. Everyone will work together to ensure your safety and provide you with the very best care.

**Nursing:**

The preoperative, operating room (OR) and floor nurses will provide valuable education and care for your during your stay in the hospital. They will monitor blood tests, give you your medication and support you as you begin your recovery. They will teach you, your Orthopedic Coach and your family how to care for your incision, apply dressings and care for yourself as you recover from surgery. Your nurse will be checking pulses, sensation and functioning of the operative extremity. They will be monitoring your progress and assuring that you are prepared for discharge.

**Anesthesia:**

Anesthesia services will be provided by East Bay Anesthesia Medical Group and you will be billed separately for these services. Any questions related to services provided, billing and payment options may be directed to:

**East Bay Anesthesia Medical Group**
3000 Colby Street, Suite 205
Berkeley, CA 94705
Phone: (510) 666-0854
Fax: (510) 666-1192
Email: www.ebamg.com

**Orthopedic Surgeon and Assistant Staff:**

The orthopedic surgical staff will evaluate you daily at the hospital and monitor your progress. Your surgeon will discharge you from the hospital when he/she feels that you are ready and safe to be discharged, typically 1-2 days following your surgery.

**Physical Therapy (PT)**

The physical therapist will work with you in the hospital to strengthen your body for optimal success. You will learn range of motion exercises and any precautions as directed by your surgeon. The physical therapist will instruct you in the use of any adaptive equipment for mobility and safety and reinforce safety precautions for you to follow at home.

**Occupational Therapist (OT):**

The occupational therapist will teach you how to perform your day to day activities, including how to dress, bathe and toilet, while you are recovering from your surgery. The occupational therapist will also instruct you in the use of adaptive equipment, make sure that you know how to use it properly and also reinforce safety precautions.

**Case Manager/Social Worker:**

A case manager or social worker facilitates your discharge plan, coordinates your discharge destination and ensures that you receive the necessary equipment and home health care services ordered by your orthopedic surgeon and authorized by your insurance company.

### *What happens on the Orthopedic Floor after surgery?*

You will likely stay in the hospital on the orthopedic specialty unit for 1-2 days while you recover from surgery.

Your IV will stay in your arm at first, but it can be removed quickly once you are able to resume eating and drinking.

Nurses, physical and occupational therapists will help you sit, get out of bed, learn to dress and walk again after your surgery. You should request pain medications frequently enough to be sure that you can participate well in therapy and accomplish these activities with reasonable comfort.

*If you had spine surgery:* You may be given a brace to keep your back or neck stable. If so, you will be shown how to wear it. While in the hospital, practice bracing yourself to aid your home recovery. Abdominal muscles support the spine. Tightening these muscles to brace yourself will help prevent pain and re-injury. Put your hands on the lower part of your stomach. Gently tighten your abdominal muscles by pulling in your stomach. Breathe normally without relaxing your abdomen.

## What to Expect After Surgery:

### *What should you expect to occur postoperatively?*

- Nurses taking vital signs and checking on you often.
- Hourly rounding by one of your care team members (while awake).
- Nurses will assess your level of pain using the pain scale in your binder.
- You may need daily blood draws per your surgeon's orders.
- Dressing changes, if needed, as directed by your surgeon.
- Blood transfusions are rare, but may occur per your surgeon's orders.
- IV antibiotics will be completed within 24 hours after surgery.
- Coughing, deep breathing exercises and use of the Incentive Spirometer 5-10 times hourly while awake. See the instructions in this education binder for the proper technique to use the Incentive Spirometer.
- An ice machine pad or ice packs may be placed over your incision site.
- Every 2 hours perform anti-phlebitis leg exercises including ankle pumps to prevent blood clots (while awake).
- Ted hose, sequential compressive devices and/or foot pumps will be on your legs/feet while you are in bed.
- IV fluids will be discontinued when you are able to drink liquids and pain pills well.
- Liquids and diet progression will be allowed as tolerated. Your diet menu will be filled out for breakfast for the following day. Special requests may be accommodated; however, it may take extra time to receive them.
- Anti-nausea and laxatives are available as needed.
- Consider taking pain medications at bed time to get a good night sleep.
- You will be sitting in the chair for all meals.
- You may dress in your own clothes, shave and wear makeup while you are in the hospital.
- Wound drain (if placed during surgery) will be removed by postoperative day #1 or #2.
- Bladder catheter (if placed prior to surgery in the operating room) will be removed by postoperative day #1 or #2.
- Early mobility including sitting at the edge of the bed, sitting in a chair and walking. You should expect to increase your activity level and walking distance daily.

- You will have your first physical therapy session the day of your surgery if you arrive to the floor before 4:30 pm. If you arrive after 4:30 pm, nursing will assist you to sit at the edge of the bed, chair or toilet (if you had a spinal anesthesia, it must be resolved prior to mobilization out of bed).
- If you had a total knee replacement or a posterior total hip replacement, you may be required to wear a knee immobilizer.
- Beginning on postoperative day #1, physical therapy will continue twice daily (morning and afternoon) per your surgeon's orders. Prepare by taking pain medications 30-60 minutes before your scheduled session.
- Beginning on postoperative day #1, occupational therapy begins once daily per your surgeon's orders.
- You may want to limit visitors to get a short rest between therapy sessions.
- Your Orthopedic Coach's name, your patient selected Functional Orthopedic Goal and therapy schedule will be written on the Communication White Board in your room.
- Orthopedic related education material is available on the TV system in each room.
- The case manager will resume planning for your discharge needs upon your arrival to the floor.
- You will be discharged home when your pain is controlled, you have met your Functional Orthopedic Goal with therapy and your self-care needs are met.

## Therapy and Recovery:

### *What should you expect in the hospital during your recovery and rehabilitation process?*

It will take several months for your body to fully heal. Healing time is variable based on your specific surgery. It may take a full year to develop full motion and strength. Your exercise program is a vital part of your recovery. How much strength and motion you regain depends a great deal on your level of commitment and how faithfully you do the exercises.

For lower extremity joint replacements, you will likely be using a walker, crutches or cane for the first one to two months after your surgery.

For shoulder surgery, you will be instructed to wear a sling for the first 4-6 weeks after your surgery.

**Physical Therapy in the Hospital will include:**

- Twice daily exercise sessions
- Exercises prescribed by you surgeon
- Training in your home exercise program
- Exercises will start gradually
- Walking and instruction on using the appropriate assistive device as needed
- Transfers (getting in and out of a bed and chair)
- Stair training (if appropriate)
- Balance training
- Instruction on your weight bearing status
- Instruction on dislocation precautions (if appropriate)

**Occupational Therapy in the Hospital will include:**

- Learning how to do your day-to-day activities such as toileting, bathing, dressing, etc.
- Instruction on how to use adaptive equipment, if needed, for dressing yourself
- Education on any showering or toileting equipment you may need at home.
- Adapting your environment to improve your independence

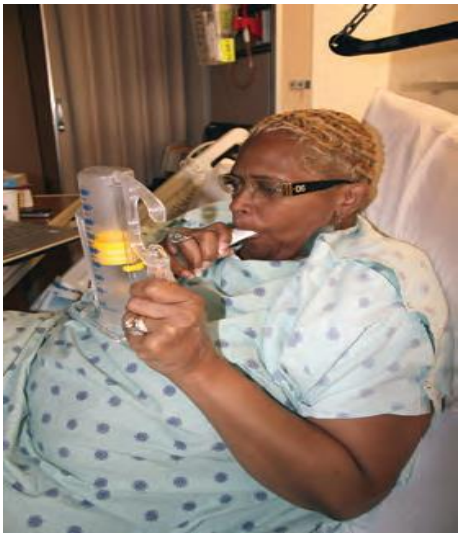
Your recovery period after surgery depends on you, your health and the surgery performed. You may see and feel benefits immediately; however, you must continue to follow your rehabilitation program for several months to get the total benefit of you surgery.

Please consult your surgeon if you have ANY questions regarding activities you would like to do. Your surgeon will help you determine an activity level that is right for you.

# How to Use an Incentive Spirometer

## Purpose

Deep breathing exercises with your incentive spirometer (breathing exerciser) will help open the air sacs in your lungs and may reduce future problems such as pneumonia. You can use this incentive spirometer on your own and take an active part in your recovery!



## Steps

You may need to put the spirometer together. If so, attach the open end of the clear tubing to the port or opening at the bottom of the incentive spirometer. The mouth piece is at the other end of the tubing.

- Hold the incentive spirometer upright.
- Breathe out normally, close your lips tightly around the mouth piece and inhale slowly and deeply through your mouth. This slow deep breath will raise the piston in the clear chamber of the spirometer. This is similar to trying to suck a thick milkshake through a straw.

  It is important to breathe in slowly to allow the air sacs in your lungs time to open.

- Continue to breathe in, trying to raise the piston as high as you can. Read the volume that you have achieved at the top of the piston.

  Each day you use your incentive spirometer you should see improvement in how deep a breath you can take.

  This may make you cough, which is normal. Coughing will help to open up your lungs.

- When you feel like you cannot breathe in any longer, take the mouth piece out of your mouth. Hold your breath for 3 seconds then breathe out slowly.

- Breathe normally for a few breaths and let the piston return to the bottom of the chamber.

- Set the goal indicator tab at the level that you reached.

- Repeat the slow, deep breath in and slow breath out again. Continue this cycle for a total of 5-10 breaths. If you start to feel light-headed or dizzy, slow your breathing down and give yourself more time with normal size breaths between the deep breaths.

- After you have taken 5-10 deep breaths on your incentive spirometer, it is important to cough to try to remove secretions that build up in your lungs.

- Repeat steps 2 through 8, 5-10 times every hour, or as ordered by your doctor.

**Keep the incentive spirometer within reach so you will remember to use it frequently. To help remember to use it every hour, some patients use their incentive spirometer at the commercial breaks between TV shows.**

• Using your spirometer frequently while you are recovering at home will help keep your lungs clear.

## Pain Management in the Hospital:

### *How is my pain controlled post-operatively?*

It is normal to have some discomfort following surgery. However, pain control is very important to maximize your ability to participate in therapy and perform your daily activities following your surgery. Various forms of pain management can be administered in pill form, by injection and/or through your IV.

Your nurses will continue to ask you to rate your pain using the scale below (INSERT PAIN SCALE PICTURE). It is important to tell your nurse or a member of your care team if your pain is beginning to worsen. Rate your pain from 0 (no pain) to 10 (the worst pain imaginable). This is the most effective manner to help you and to let your care team know if your medication is working and how well we are managing your pain. It is very important to stay ahead of the pain and take medication proactively to prevent the pain from becoming too severe.

### *How can you help manage your pain post-operatively?*

- Discussing your pain control options with your health care provider.
- Letting your healthcare providers know as soon as you begin having pain.
- Taking your pain medication at regular times. Most pain medication taken by mouth needs to be taken at least 20 to 30 minutes before you will feel the effect.
- Rating your pain using the 0 (no pain) to 10 (the worst pain imaginable) pain scale.
- Reporting you pain as a number helps the doctors and nurses know how well your treatment are working and whether or not they need to make any changes.

### *What are the different types of pain management?*

- **A single shot nerve block or nerve catheter.** The anesthesiologist will discuss if this is appropriate for you and, if so, the nerve block or nerve catheter will be administered prior to surgery. A nerve block or nerve catheter will temporally make your extremity not function normally. If a nerve block or nerve catheter is administered in your lower extremity, please be sure to ask for assistance from nursing or therapy when you need to get out of bed to prevent you from falling. Nerve blocks or nerve catheters can be useful to decrease postoperative pain for patients having shoulder, hip, knee or ankle surgery.

- **Intra-articular joint injections.** Injections into the surrounding joint capsule and/or tissues can provide pain relief for 12 or more hours.

- **Oral medication.** Multi-modal oral medication is prescribed by your surgeon or the Pain Service and is administered by the nursing staff. This may include a combination of medications such as Tylenol, anti-inflammatory medications and/or narcotics. Anticipate taking the oral pain medication 30 to 60 minutes before therapy sessions. This will allow the pain medication to have time to take effect and allow you to fully participate in each therapy session.

- **Non-medicine methods.** Non-medicine methods of pain control can also be very effective. These methods include deep breathing exercises, guided imagery, ice or heat, repositioning, relaxation techniques, acupuncture, acupressure, meditation, music massage or diversional activities such as reading or watching a favorite movie. Please consider trying some of these methods before coming to the hospital.

## Patient Information from East Bay Anesthesia Medical Group:

**Peripheral Nerve Block Information Sheet**

The single shot nerve blocks and/or peripheral nerve catheters are offered as an optional addition to the main anesthetic. Your surgeon and anesthesia pain management team may determine that a single shot nerve block or continuous peripheral nerve catheter is an option for you to help decrease post-operative pain following your surgery. The following information is provided to introduce you to the concept of peripheral nerve blocks and continuous peripheral nerve catheters.

Nerve blocks and continuous peripheral nerve catheters provide significant pain relief following surgery of an extremity such as a hip, knee, ankle or shoulder. Potential health benefits of nerve blocks and nerve catheters include decreased need for intravenous and oral pain medication, less post-operative sedation, decreased likelihood of post-operative nausea and vomiting and possible earlier discharge home.

The following nerve blocks or continuous peripheral nerve catheters may be used to provide sustained post-operative pain relief:

- Lumbar plexus blocks or catheters for posterior total hip replacements.
- Femoral or adductor canal nerve blocks or catheters for knee replacements.
- Popliteal nerve blocks or catheters for foot and ankle surgeries.
- Inter-scalene nerve blocks for shoulder surgery.

A single shot nerve block will make the extremity feel numb for up to 6 to 8 hours after the administration of the block by the anesthesiologist.

If a peripheral nerve catheter is inserted by the anesthesiologist, it is connected to a pump post-operatively that coats the nerve with local anesthetic thereby blocking painful sensation to the extremity and causing numbness in the extremity that will last up to 6 to 8 hours after the catheter infusion is disconnected.

It is very important for you to start your oral pain medication prior to the resolution of the numbness. This will allow for a smooth transition from the pain relief supplied by the block or peripheral nerve catheter to pain relief supplied by the oral pain medication.

Risks of nerve blocks or nerve catheters may include inadequate pain relief, bleeding, infection, reaction to local anesthetic or nerve injury. Kinking of the catheter tubing and inadvertent discontinuation of the catheter can also occur. Please discuss any concerns with your anesthesiologist.

If you have a nerve block or peripheral nerve catheter administered, please keep the operative extremity well protected for the duration of the numbness. If you have a nerve block or peripheral nerve catheter administered to your hip, knee or ankle, walk only with assistance and the use of crutches or a walker because your leg strength may be reduced until the block wears off.

Please discuss all concerns regarding this procedure and anesthetic care with your anesthesiologist on the day of your surgery. The above information is not intended as a substitute for a complete discussion with your anesthesiologist. It is intended for your education and to enhance your ability to ask informed questions.

### *What are the common questions about pain medications?*

**Could I become addicted to pain medication?**

It is rare to become addicted to pain medication if they are taken properly. Addiction means a person is taking medication to satisfy an emotional or psychological need rather than for a medical reason. Addiction is often confused with physical dependence. Physical dependence occurs after you have been using narcotics for prolonged periods of time (more than two weeks). Physical dependence is a chemical change your body undergoes which causes withdrawal symptoms if the medication is abruptly stopped. This is a normal response and can

be avoided by gradually reducing the medication over several days. Physical dependence is not an addiction.

**Could I build up a tolerance to the pain medication so it stops working?**

For some medications, after a person takes the same amount for a long period of time, the body does not respond as well to the same amount of the medication. Larger or more frequent doses of medication are needed to obtain the same effect. This is called "tolerance" and it sometimes happens in people who take narcotics for pain control over a long period of time. This should not be an issue following your surgery because you will only be taking narcotics for a short period of time. However, if you have taken narcotics for a long time prior to your surgery you will want to discuss this with your surgeon.

**What if I have side effects from the pain medication?**

All drugs have potential side effects. Not everyone who takes a medication will experience the side effects. Some of the more common side effects of prescription pain medications are constipation, drowsiness and nausea. You should always discuss any side effects with your healthcare provider.

**What if I do not take my pain medication?**

If you do not take your pain medication, you may not recover as quickly. Pain causes increased fatigue which can slow your recovery and adds stress to yourself and your caregivers. Pain medication allows you to stay mobile and helps you to get the most out of your exercises.

## Discharge from the Hospital

**Discharge Planning:**

Our primary goal in the hospital is to prepare you for a safe transition home. A number of factors will influence whether you return directly home after your hospital stay or continue your rehabilitation program in a more structure setting. Based on your needs and functional skills, your surgeon, case manager, social worker and therapists will work collaboratively to determine which discharge plan is most appropriate for you. Remember, you are also part of the team.

Before you go home, equipment may be recommended to help you use in the bathroom and perform other self-care activities safely. Some of this equipment may be covered by your insurance plan. Your case manager will obtain authorization from your insurance company and will arrange for the recommended equipment to be delivered to you.

Your physician may refer nursing and/or therapy staff from a home health care agency to see you at home. Home health care may include follow-up care by nursing and/or therapy services. ***It does not include household tasks such as cleaning, laundry and meal prep. These services need to be privately arranged. Your case manager will provide you with a list of resources if needed.*** If you would like to discuss home care after you are discharged, please call the case management department at 510-869-6160.

If you are doing well in the hospital at the time of discharge and will not be homebound, your physician may recommend you start outpatient physical therapy following discharge from the hospital where you will have access to more equipment and modalities which will enable you to recover faster.

**Discharge:**

Once you are medically stable and no longer require care in a facility, your doctor will discharge you home. You will be more comfortable in your own environment. Please review your individual insurance plan or talk to your insurance provider to determine what services will be covered after you are discharged home.

## Home Recovery

The sooner you become active, the sooner you will get back to your normal routine. However, you need to protect your healing body. Increase your activity level at a slow, but steady pace as directed by your surgeon. It is very important that you follow any guidelines and precautions that your surgeon or therapist have given you.

During the first few weeks after surgery you will likely feel weak and tired at first, but you should feel a little stronger each day. Keep moving as much as you can without making your pain increase. Increased pain for more than 2 hours after an activity means you have done too much too soon. When you feel pain, slow down and pay more attention to your posture and movements. By about the sixth week after your surgery, you should be well on the way to healing, but continue to let pain be a warning to slow down.

*If you had back surgery*: You may feel some pain, tingling or numbness in your back or legs. All of these symptoms should decrease as your nerves heal.

### Wound Care:

It is normal for your incision to feel sore. Nurses will teach you how to care for your incision and instruct you on when to remove the bandage covering your incision. Your surgeon may request a home health nurse to change your dressing, evaluate your incision site and/or remove staples (if applicable). Talk to your case manager in the hospital about your needs.

Once you are permitted to remove your bandage, inspect your incision site daily after washing your hands. Your surgeon will inform you when you are able to get your incision site wet in the shower. When you are permitted to shower, gently wash your incision site with soap and water and pat your incision dry with a clean towel when you are finished showering. Do not rub your incision site and do not apply any ointments, creams or lotions to your incision site until your surgeon gives you permission to do so.

If your incision is draining, keep your incision covered and notify your surgeon. If there are steri-strips (small tapes) across your incision site, let them fall off on their own (do not pull them off) which generally occurs at about two weeks postoperatively. Keep your incision out of the sun as it can burn easily. Do not go in a swimming pool, hot tub or bath until you are given permission by your surgeon (about 6-8 weeks after surgery).

### Stop Smoking:

Smoking interferes with your body's ability to absorb oxygen which slows your healing process and makes you more vulnerable to infections and all complications. It is very important not to smoke during the recovery process.

### Pain Medications:

People experience different degrees of pain following joint replacement or spine surgery. Your physician will give you a prescription for pain medications depending on your tolerance. Your surgeon or pharmacist can answer any questions that you may have about any of your medications.

### Anticoagulant Medication:

You may also be instructed to take an anti-coagulant (ie. blood thinning medication) such as Aspirin, Eliquis, Xarelto, Lovenox or Coumadin to prevent blood clots from developing for the first 2 to 6 weeks following your surgery based on your medical history, the type of surgery you had and your surgeon's preference.

DO NOT take any of these medications before surgery because they will cause your blood to be too thin to safely proceed with surgery and your surgery will have to be postponed.

Your surgeon may recommend over the counter Aspirin as your anti-coagulant if you are at standard risk for developing a blood clot after surgery.

Eliquis and Xarelto are newer and stronger blood thinning medications that are to be taken by mouth. You will be instructed on blood thinning precautions while you are in the hospital.

Lovenox is a blood thinning medication that is injected just under the skin. You and your Orthopedic Coach or family member will be given a Lovenox training kit while you are in the hospital and taught how to administer the Lovenox injections before you are discharged home.

Coumadin is a blood thinning medication that is taken by mouth. The dosing of Coumadin is regulated by blood tests drawn 1-3 times weekly. There are dietary concerns and restrictions that must be followed while you are taking Coumadin; therefore, you will be given a Coumadin education packet to reference at home.

Eliquis, Xarelto, Lovenox and Coumadin require a prescription from your surgeon and may require prior authorization from your insurance company. Please fill the prescription before going to the hospital and leave the medication in a safe place for when you return home.

Talk to your surgeon or pharmacist before taking any drugs or medications if you have any questions or concerns.

## Compression or Support Stockings (TED Hose – if ordered):

If ordered by your surgeon, these stockings should be worn for at least the first month after surgery to help prevent blood clots from forming in your lower legs. Please remember to remove the stocking twice daily and inspect your skin. Do not allow the stocking to roll down at the top edge as this will produce a tourniquet effect which will interfere with your proper circulation and cause skin breakdown. The stockings may be hand washed and air dried. Do not put the stockings in the dryer because they will shrink. The stockings are tight and may be difficult to put on yourself. If you are having difficulty, use an assistive device or ask for help to apply and remove them.

## Portable Sequential Compressive Devices:

If ordered by your surgeon, portable compressive devices must be worn on both lower legs for a minimum of 18-20 hours daily until your surgeon instructs you to stop wearing the devices. These devices intermittently squeeze your lower legs to prevent blood from pooling in your lower legs and, thereby, reduce the risk of blood clots from forming. Please ask you surgeon before surgery if these devices are recommended for you. If your surgeon orders portable sequential compressive devices for you, please bring them with you to the hospital so that they can be applied to your lower legs prior to your ride home from the hospital.

## Outpatient Therapy:

Your physician may prescribe outpatient physical therapy for you. The timing of this will depend on how mobile you are. The therapist will help design an exercise program to improve your walking and increase your mobility. Depending on your needs, your physician and therapist will determine the frequency and duration of your therapy visits. Discuss when to start outpatient physical therapy with your surgeon.

Many patients continue outpatient physical therapy with the same therapist that they did Prehab with before surgery. There all patients receive a thorough biomechanical evaluation and the therapist develops a therapeutic treatment program designed specifically to meet each patient's needs. The key to success of this program is that they promote an environment of wellness and teach you how to continue your rehabilitation program at home. Regular follow-up and close communication with your surgeon ensures coordinated care to achieve your therapy goals. Therapy sessions can consist of a combination of individual and/or group therapy (with other patients recovering from the same or similar surgery). Many patients choose to join the Open Gym program at the completion of their structured therapy sessions. Please call (510) 204-1788 for more information.

## Walking:

Walking is an important form of exercise after surgery. Your therapist will teach you how to use the recommended assistive device you will use for walking, if needed. Please continue to use this device until instructed otherwise by your surgeon or therapist. Walking strengthens your leg and back muscles, increases your endurance, relieves stress, improves your mood, prevents complications and speeds your recovery. Begin by walking around the house and build up to several short walks a day. You may find it helpful to talk to your therapist about setting a safe and realistic walking goal.

## Driving:

You may be able to drive or return to a desk job within weeks after your surgery. If you do more active work, you may need to wait longer before returning to work. Please confirm with your surgeon when you are able to drive.

*For spine surgery:* Adjust the car seat so that your knees are level with or just below your hips. To get out of the car, pivot on your buttocks and swing your legs out, keeping your knees together. Be careful not to twist your spine. To get into the care, do the reverse.

*For hip surgery:* Make sure you are following the hip precautions specific to your surgery.

## Bathing:

Your surgeon will instruct you when you are allowed to shower. Many surgeons allow showering 1 to 2 days after surgery if the incision is closed, no longer draining, covered with a special water resistant dressing and/or skin glue was applied over the incision site. Please confirm with your surgeon when you are allowed to shower before showering after surgery.

If staples were used to close your incision site, they will need to be removed 10-14 days after your surgery. Water can carry bacteria into the staple holes or an open wound putting your surgical site at risk for infection. Therefore, your surgeon may not want you to shower without covering the incision until these holes heal over which occurs approximately 24 to 48 hours after the staples are removed. Please confirm with your surgeon when you are allowed to shower after your staples are removed.

Soaking in a bath tub, hot tub or swimming pool is NOT recommended until your incision site is completely healed which generally occurs about 45-60 days following your surgery. Please discuss this with your surgeon.

**Bathroom Safety Tips:**

The following are some suggestions that you may find helpful following your surgery to help with bathing and toileting:

- Prevent slip and falls by using non-slip bathmats on your bathroom floor and in your tub or shower.
- Watch out for hazards, such as wet floors.
- Use grab bars in your shower or tub for support as you get in and out.
- Sit on a bath bench or shower chair while you bathe.
- Use a long handled sponge to wash hard to reach areas.
- Use liquid soap so you don't need to pick up a dropped bar of soap.
- Install a hand held shower hose and use it to wash your hair.
  *Following Spine surgery:* Bend at the knees and hips under the shower head to avoid arching your back.
- If you have had surgery that limits bending, use a commode chair or elevated toilet seat to raise the height of your toilet.
- Talk with your occupational therapist in the hospital if you need more instructions in using bath aides.

## *Water Exercise Classes:*

When your surgeon gives you permission to get in a swimming pool, you may find it helpful to participate in water exercise classes. The following is a list of places that offer water exercise classes:

- Downtown Berkeley YMCA
  2001 Allston Way
  Berkeley, CA 94704
  (510) 848-9622

- Downtown Oakland YMCA
  2350 Broadway
  Oakland, CA 94612
  (510) 451-9622

- Mt. Diablo Family YMCA
  350 Civic Dr.
  Pleasant Hill, CA 94523
  (925) 687-8900

- Albany Pool
  1311 Portland Ave
  Berkeley, CA 94706
  (510) 559-6640

- Richmond Swim Center
  S. 45th St. & Fall Ave
  Richmond, CA 94804
  (510) 620-6788

- Hayward Plunge
  24176 Mission Blvd.
  Hayward, CA 94544
  (510) 881-6703

## Traveling:

If you are planning on traveling in a plane or taking a long car trip after surgery please notify your surgeon.

Some implants may set off metal detectors. This may cause heightened screening measures for you at airports. Anticipate this possibility and allow extra time.

You may receive a card after surgery with pictures of your surgical fixation or prosthesis. Typically this card or a note from your surgeon will not influence airport security screening measures.

*Following joint replacement*: Traveling on a plane or on a long car ride within the first 6 weeks after surgery may increase your risk of developing a deep vein thrombosis (ie. blood clot in your lower leg) or pulmonary embolism (ie. blood clot in your lungs). If possible, please do not plan any plane trips or long car rides for the first 6 weeks following your surgery; however, if you must travel please notify your surgeon for further instructions.

*Following spine surgery:* There are no set rules about traveling, but be aware that it may be difficult for you to sit for more than an hour or two without experiencing pain. If you must travel, arrange for stops along the way so that you can break up the sitting time. This is important to prevent complications and for your comfort.

## Diet:

In general, there are no specific diet restrictions following a joint replacement or spine surgery. Following anesthesia, surgery and while taking pain medication you may experience a decrease in appetite. However, it is still important to eat a nutritious diet to aid in optimal healing. If you find that your appetite has decreased, try to eat smaller meals more often rather than 3 large meals. Remember to make healthy choices including fiber, fruits, vegetables, protein and adequate calories. Your body requires more calories to heal. Also remember to drink plenty of water.

Your health care team may recommend calcium and vitamin D supplements to aid in bone growth and healing and/or iron supplements to help your body restore its normal supply of red blood cells.

## Child Care:

If you have small children, arrange for help while you are recovering. Other recommendations include:

- Put the changing table on a raised surface or adjust it to waist height.
- Use a reacher to pick up small objects such as toys, from the floor.
- If you must lift a baby from the crib, lower the railing of the crib and bring the child close to your body.

*Following shoulder replacement:* Your operative shoulder will be in a sling for several weeks following surgery and you will not be permitted to use that arm for any lifting, pushing, pulling or carrying during that time.

## Dental Work Precautions:

Following your surgery, you will now have metal in your body and your joint replacement or spine will be at risk for infection if bacteria from your mouth enters your bloodstream through a small cut in your gums. As a result, you will need to take special precautions before any invasive procedures and any dental work – including your routine teeth cleaning.
Therefore, each time you go to the dentist following your surgery, it is very important that you remind your dentist that you have had a joint replacement or spine surgery. Your surgeon will inform you what antibiotic you should take and instruct you on how long following your surgery you are required to take antibiotics prior to any invasive procedure and any dental work.

## Sexual Activity:

As you recover from your surgery, you may feel ready to return to sexual activity, but first be sure to ask your surgeon if it is safe for you. When permitted to resume sexual activity, please be sure to follow any precautions specific to your surgery.

# Some Possible Postoperative Complications

Complications are rare; however, you should be familiar with the signs and symptoms of the following complications and understand how to prevent the complications.

## Infection

Signs of infection include:

- Drainage from your incision site especially if the drainage is increasing, cloudy and/or foul smelling.
- Increased swelling and redness at the incision site.
- Fever greater than 101 degrees Fahrenheit that does not go down after taking Tylenol.
- Increased pain at your surgical site

Prevention of Infection:

- Use Chlorohexidine Skin Prep before your surgery as directed by the Preoperative Clinic.
- Keep your incision clean and dry until your surgeon gives you permission to shower.
- Good, consistent hand hygiene by always washing hands with soap and water.
- Notify your dentist that you have had a total joint replacement or spine surgery. Ask your surgeon if you are required to take antibiotics before any dental work. And if you are, for how many years. The duration you are required to take antibiotics before any dental work will vary depending on your surgery, your individual risk factors and your surgeons preference. Please ask your surgeon what is appropriate for you.

## Deep vein Thrombosis (DVT)

Surgery may cause the blood to slow in the veins of your legs creating a blood clot also known as a deep vein thrombosis (DVT). Blood clots can form in either leg, but prompt identification and treatment is important to prevent a more serious complication. Call your surgeon immediately if you have any concern that you may have a deep vein thrombosis (DVT).

Signs of deep vein thrombosis (DVT) include:

- Swelling in the thigh, calf or ankle that does not go down with elevation of your foot above the level of your heart
- Pain, heat and tenderness in the calf, back of the knee or groin

Prevention of deep vein thrombosis (DVT):

- Walking
- Foot and ankle pump exercises
- Compressive stockings
- Leg elevation
- Anti-coagulant medication (blood thinning medication) taken as directed by your surgeon **AFTER** your surgery
- No pillows under your knees

## Pulmonary Embolism (PE)

A pulmonary embolism (PE) is a blood clot in the lungs. Generally, the blood clot began in the leg vein as a DVT and traveled through the body to the lungs.

A pulmonary embolism is a medical emergency. Call 911 immediately if you have any of the following:

Signs of pulmonary embolism (PE) include:

- Sudden shortness of breath
- Difficulty breathing or rapid breathing
- Sudden chest pain
- Sweating
- Confusion

Prevention of pulmonary embolism (PE):

- Recognize the signs of a blood clot in the leg and call your physician immediately
- Walking
- Foot and ankle pump exercises
- Compressive stockings
- Leg elevation
- Anti-coagulant medication (blood thinning medication) taken as directed by your surgeon **AFTER** your surgery
- No pillows under your knees

## Pneumonia

Pneumonia is a serious inflammation of one or both of the lungs and parts of the airway that commonly is caused by a bacterial infection.

Signs of pneumonia include:

- Production of phlegm
- Shortness of breath
- Fever
- Coughing
- Muscle pain and weakness

Prevention of pneumonia:

- Use of the Incentive Spirometer 5-10 times every hour while awake
- Walking
- Sitting up in a chair for all meals
- Deep breathing
- Coughing
- Good nutrition and plenty of fluids
- Good sleep

## Constipation

At one time or another, most everyone experiences constipation. There is no correct number of daily or weekly bowel movements. Normal may be three daily or three weekly. Constipation may be caused by medications (see list below), lack of fluids, not eating enough fiber and/or decreased activity. Talk to your physician if you experience a significant or prolonged change in bowel pattern.

Medications that contribute to constipation include:

- Pain medications
- Anesthesia
- Iron supplements
- Antacids (containing aluminum and calcium)
- Anticonvulsants
- Antidepressants
- Anti-Parkinson drugs
- Antispasmodics
- Blood pressure medications (Calcium Channel Blockers)
- Calcium supplements
- Diuretics

Signs of constipation include:

- Difficulty or inability to have a bowel movement
- Bloated
- Sluggish
- Abdominal discomfort
- Headaches

Prevention of constipation:

- **Increased mobility.** Walking is the most helpful; however, coughing and deep breathing, use of the Incentive Spirometer, leg exercises, sitting in a chair for all meals, chewing gum (1 hour 3 times daily) can help return normal intestinal mobility or function
- **Proper nutrition.** Eat foods high in fiber, whole grains, leafy greens, and fruits. Frequent, small meals are more easily tolerated after surgery.
- **Drink a lot of water.** Aim to consume 64 ounces of water daily (unless fluids are restricted by a medical condition).
- **Use pain medications only as directed and stop as soon as your pain is well controlled.**
- Medications such as stool softeners, laxatives, suppositories and enemas are available as part pf your bowel management program as needed.

## Dislocation (Hip Replacements only)

### Anterior Approach Hip Replacement:

Signs of anterior hip dislocation include:

- Severe pain in the hip area
- Unable to walk or move leg
- Leg appears shorter than the other

Prevention of anterior hip dislocation:

- Do not hyperextend your hip or extend your leg behind you
- Do not extremely twist and rotate your leg outward
-

### Posterior Approach Hip Replacement:

Signs of posterior hip dislocation include:

- Severe pain in the hip area
- Unable to walk or move leg
- Leg appears shorter than the other

Prevention of dislocation:

- Do not cross your legs
- Do not bend at the hip pas 90 degrees
- Do not twist or rotate your leg outwards

## Postoperative Depression

Days and weeks leading up to surgery may have caused increased stress and anxiety. Now that surgery is finished, emotions may be heightened.

Some common psychological reactions include:

- Frustration
- Irritability
- Anxiety
- Anger
- Fear
- Sadness or depression
- Change in eating, sleeping and bowel movements
- Emotional swings – crying or laughing

All are responses to the unknown, loss of control, dependence on others and desire for immediate improvement in health condition.

Suggested coping strategies include the following:

- Learn to talk to yourself in a positive way.
- Have patience.
- Find others who are supportive and understand (Orthopedic Coach, family or friends).
- Get enough rest and exercise.
- Find enjoyable activities.
- Give yourself credit for the progress you are making.
- Celebrate large and small gains.
- Set realistic goals with the help of your surgeon, therapist and nurses.
- Let yourself cope without feeling guilty (a good cry can make you feel better).
- Ask your physician for help or a support group if symptoms last more than 2 weeks.
- Talk with friends and family.

# Life With Your New Joint Replacement or Following Spine Surgery

## Quick Guide to Home Care Instructions

### Notify your doctor if:

- You have increased pain.
- Your hip turns in and you notice a difference in your leg length.
- You develop a fever over 101 degrees that does not go down after taking Tylenol.
- Your incision appears red, more swollen and/or you notice drainage from the incision.
- You develop sudden shortness of breath.
- You have difficulty urinating.
- You require more pain medication.
- You develop calf (or arm) tenderness, pain or redness.
- You develop or have an increase in arm or leg weakness r numbness.
- You develop loss of bowel or bladder control.
- *Following hip replacement*: Your hip turns in and you notice a difference in your leg lengths.

The recovery period after surgery depends on you, your health and the surgery performed. You may see and feel immediate benefits; however, you must continue to follow your rehabilitation program for several months to get the total benefit following surgery. Participation in the gym program at 5700 Telegraph Avenue is a reasonably priced option after completion of your formal PT program. Further information may be obtained by calling (510) 204-1788.

**Note: this is the timeline for the average patient. Your progress may be different depending on your individual situation.**

**For approximately six weeks:**
Your activity level should gradually increase over the next six weeks. Your surgeon will ask to see you 2-6 weeks after your surgery and will check your range of motion and strength several times during the first year after your surgery. Be sure to keep all of your appointments. Both your surgeon and therapy team will advise you on your physical capabilities and home management activities. Every patient has different limits and your surgeon will help you determine an activity level that is right for you.

**The following is included to give you a general idea of the recovery timeline following shoulder, hip, knee and ankle replacement.**

- **DO NOT** do heavy house or yard work.
- DO use nonskid rugs on floors and nonskid mats in the bathtub or shower.
- DO use handrails in the shower.
- DO keep stairs, walkways, and hallways free of objects and clothes.
- DO wear nonskid shoes or nonskid slippers that have a back for heel support.
- DO keep emergency numbers near your phone.
- DO keep phone and lamp cords short or tucked away so you do not trip over them. Watch for small pets also.
- DO a sponge bath if you have staples in place. Once the staples are removed, you may shower or bathe regularly.
- DO protect your new joint and allow for healing during this six-week period by walking with supportive devices (walker, crutches, cane, etc.) as instructed.
- DO have someone with you the first few times you go up a long flight of stairs or until you feel comfortable and safe on your own.
- DO maintain a stable and appropriate body weight to prevent early damage, early wear or increased pain.
- *Following hip, knee and ankle replacements:* DO bear weight on operated leg as ordered by your physician.

## The following is included to give you a general idea of the recovery timeline following spine surgery

Protect your back and neck by moving safely and practicing good body mechanics.

- AVOID pivoting when standing. Instead, take small steps to turn around.
- AVOID participation in activities that require bending, jumping, jerking, pulling, pushing, lifting, twisting or running.
- AVOID sitting for longer than 45-60 minutes at a time without stand standing or stretching. After 2 hours you will become stiff and uncomfortable.

## In the future, following total hip and knee replacement surgery

- AVOID twisting or jerking on the operated leg with quick or exaggerated movements.
- AVOID pivoting when standing. Instead, take small steps to turn around.
- AVOID standing or walking with your toes turned in.
- AVOID participation in sports that require any jumping, jerking, pulling, twisting or running.
- AVOID sitting for longer than 45-60 minutes at a time without stand standing or stretching. After 2 hours you will become stiff and uncomfortable.

### Follow-Up Appointments

Your orthopedic surgeon will watch your joint closely as it heals. He or she will continue to check range of motion and strength in your leg several times during the first year after your joint replacement. Anticipate appointments at 2, 6 and 12, 24 weeks with yearly visits after that. Be sure to keep all appointments. It is a good idea to write a list of your questions so that you do not forget to ask them at your appointments.

# Hip Replacement Surgery

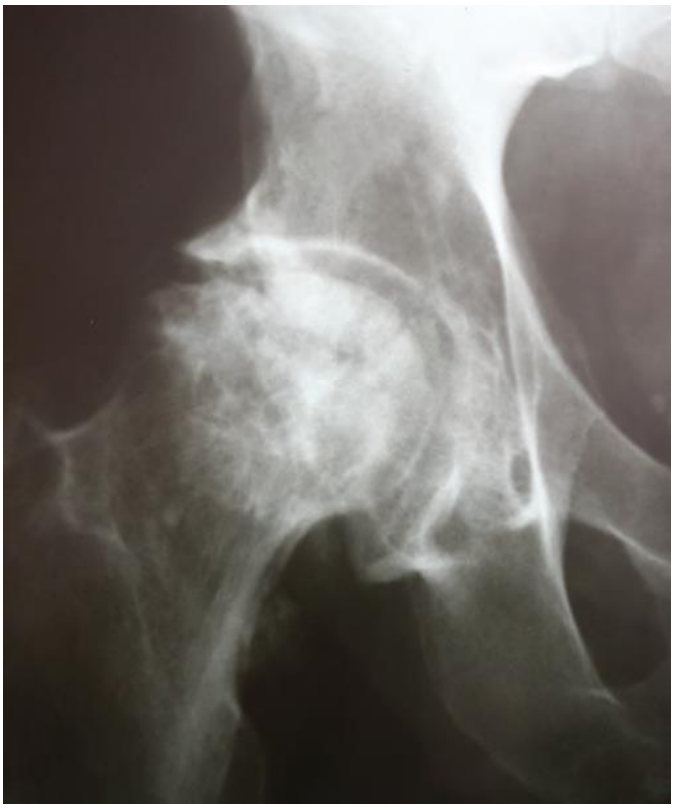
# Understanding Hip Replacement

## Understanding Hip Replacement

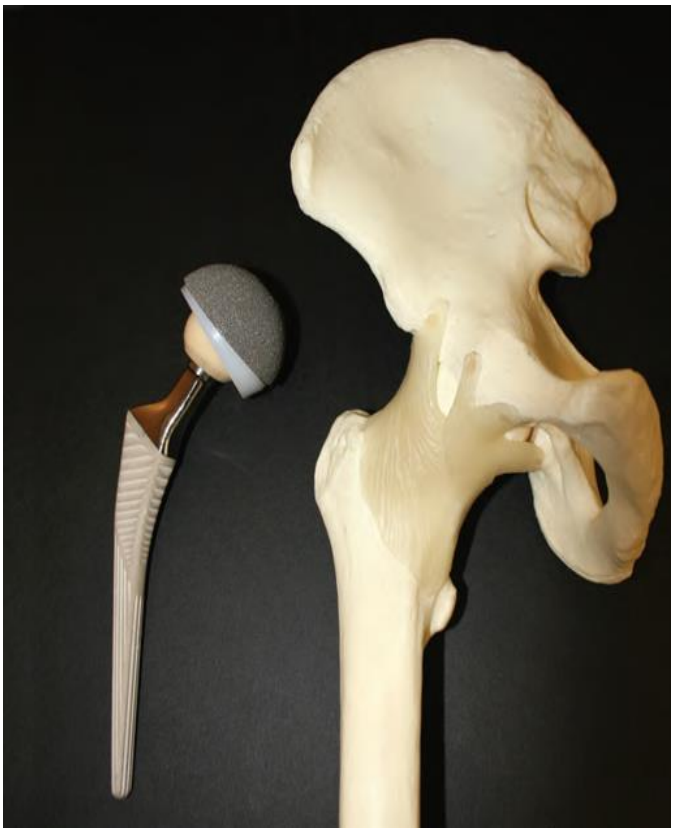
A hip joint requiring replacement has significant cartilage wear, possible bone deformity and decreased joint space. Movement is no longer pain-free and smooth. Joint stiffness and pain are frequent complaints due to the destruction of the cartilage, caused by injury or inflammation. As the cartilage is worn away, exposed bones rub on each other and cause pain.

The x-ray shown here reveals loss of joint space, bony over-growth or spurring and deformity from loss of articular cartilage.

The placement of artificial components (joint replacement removes the damages bony surface and replaces it with metal alloys and special plastic) helps regain smooth, easy motion and provides greater comfort with movement.



X-ray of diseased hip with artifacts, bone-on-bone wear, bone spurring, bone spurring, bone cysts, and deformity.



Artificial replacement components: A) Femoral Head, B) Femoral Stem, C) Acetabular Cup, and D) Plastic Liner.

## Anterior and Posterior Surgical Approaches

Your surgeon will determine which approach is best for you.

The posterior total hip replacement typically requires an incision between eight and ten inches long on the side or back of the hip. Muscles are detached to perform the operation and they are reattached when the new hip components are in place. This allows the physician to fully see the joint, the diseased bone, and the implants. During the operation, the arthritic ball of the upper thigh bone (femur) and the damaged cartilage from the hip socket are removed. The femoral head (ball) is replaced with an implant that is fitted into the femur. The socket is also replaced using a plastic liner fixed inside a metal shell. Hip precautions will need to be followed during activities after surgery to allow the muscles to heal.

The anterior or minimally invasive procedure requires the same work to be done on the joint. Your doctor may make a single, four to six inch long incision on the front of the upper thigh. Visibility is a factor and specialized instrumentation is required.

Using this technique, the surgeon can work between muscles without detaching them from the hip or thigh bones. The muscles are spared from a lengthy healing process. The arthritic bone replacement is the same as with the posterior method. Patients can freely bend their hip and bear full weight immediately after surgery and generally have fewer precautions to follow.

Not all patients are candidates for surgery using the anterior approach. Your surgeon will explain the best approach for you.

### Hip Precautions

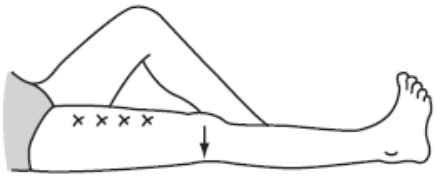
The risk for dislocation following total hip replacement decreases somewhat after the first 6 weeks, when the soft tissue has healed, and again after the first 6 months, when the bone has grown into the replacement. Dislocation risk is less because these structures stabilize the joint and support it in place. However, there will always be some risk of dislocation so you will need to be aware of your body and avoid the movements that put your new hip at risk. As you become ready to return to your favorite activities, talk to your doctor about how to integrate them into your life while still protecting your hip.

# Total Hip Replacement Exercises:

- Start with 10 repetitions of each exercise and increase to 20 repetitions.
- Do all exercises AT LEAST 3 times daily.
- Do exercises slowly.

**Quad Sets**

- Press back of leg into bed; tighten the muscles on top of your thigh.
- Hold for 5 seconds and then relax.

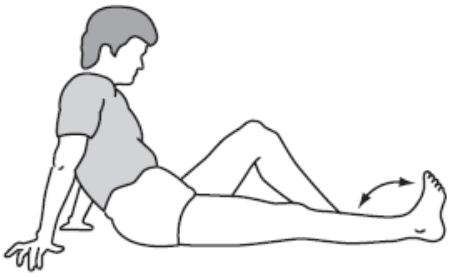


**Glut Sets**

- Squeeze your buttocks together as tightly as possible.
- Hold for 5 seconds and then relax.

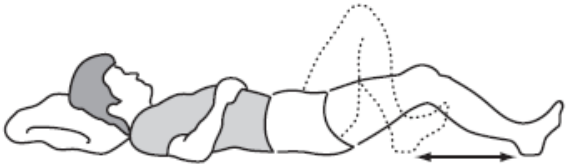
**Ankle Pumps**

- Point toes towards foot of bed.
- Pull toes towards your head.



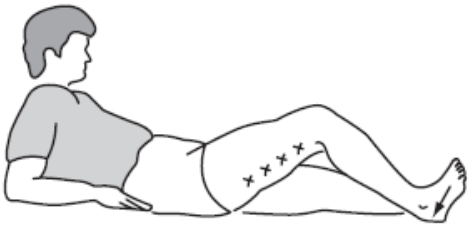
**Heel Slides**

- Keep kneecaps pointed towards ceiling throughout exercise.
- Slide one foot towards your buttocks, bending your hip and knee.
- DO NOT GO BEYOND ____ OF HIP FLEXION.
- Slowly return to starting position.



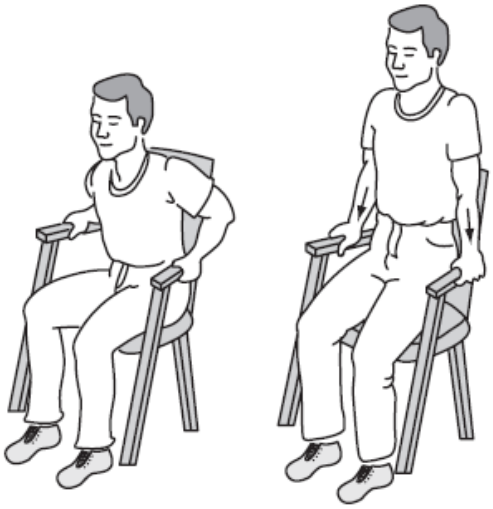
**Hamstring Sets**

- Keeping one leg straight, bend the other to the height of about 6 inches. Tighten the bent leg by digging down and back with the heel.
- Hold for 5 seconds and then relax.



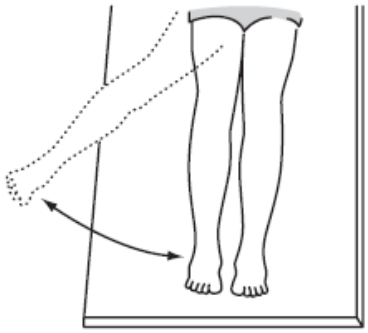
**Chair Press Ups**

- Sitting in a chair with armrest, place both hands on the armrests.
- Push down with your hands and lift your body straight up in the chair.
- Hold for 5 seconds then slowly lower your body down.



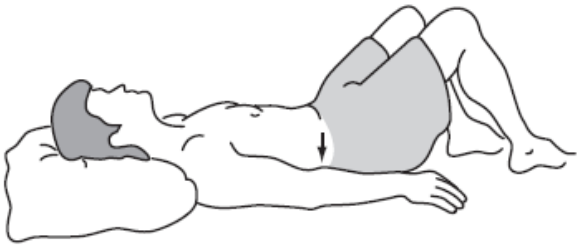
**Hip Abduction**

- Keep toes pointed towards ceiling throughout exercise.
- Slowly swing involved leg out to side as far as possible.
- Slowly return to starting position and then relax



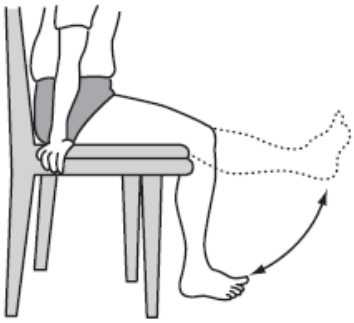
**Abdominal Bracing**

- Lie on your back.
- Bend your knees up.
- Tighten your abdominal muscles by bringing your belly button in.
- Hold for 5 seconds and then relax



**Seated Knee Extension**

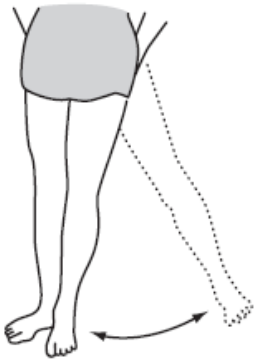
- Straighten knee as much as possible.
- Slowly lower leg to starting position.
- Be mindful of your hip flexion precautions.



**For the following standing exercises, hold on to a rail or counter for support and maintain good posture.**

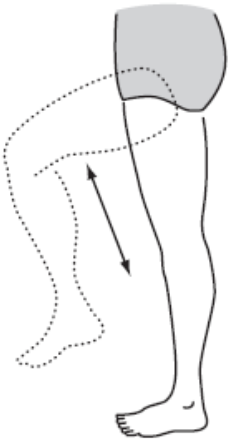
### Hip Abduction

- Slowly swing operated leg out to side as far as possible.
- Slowly return to starting position, and then relax.



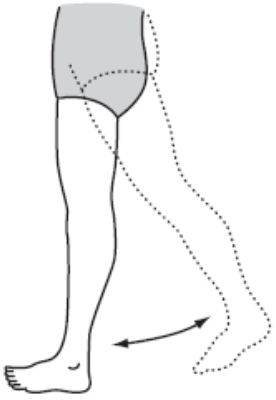
### Hip and Knee Flexion

- Slowly bend hip by bending knee to rail or counter.
- DO NOT FLEX BEYOND ___.
- Slowly lower leg to starting position.



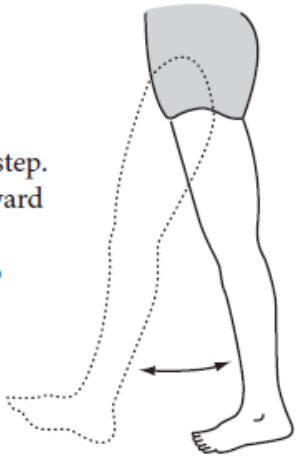
### Hip Extension

- Slowly swing your operated leg behind you as far as possible, keeping your knee straight.
- Do not bend at the waist.
- Slowly return to starting position.



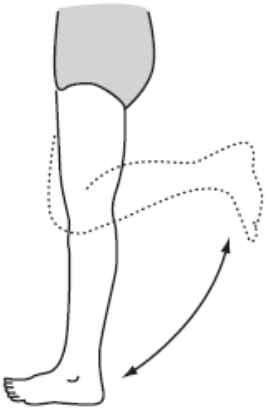
### Hip Flexion

- Slowly swing your operated leg in front of your body as if taking a step. Do not bend backward at the waist.
- Slowly return leg to starting position.



### Hamstring Curls

- Bend your knee, slowly bringing your heel up towards your buttocks.



## Total Hip Precautions Posterior Approach

**Do not bend your hip more than _____**

incorrect

incorrect

**correct**

**Do not cross your legs**

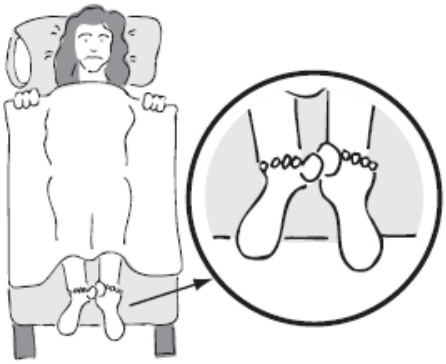
incorrect

incorrect

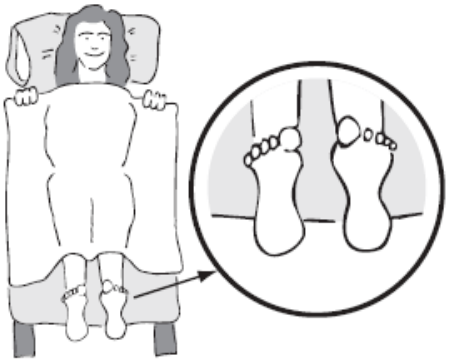
**correct**

**Do not turn your toes inward**

incorrect

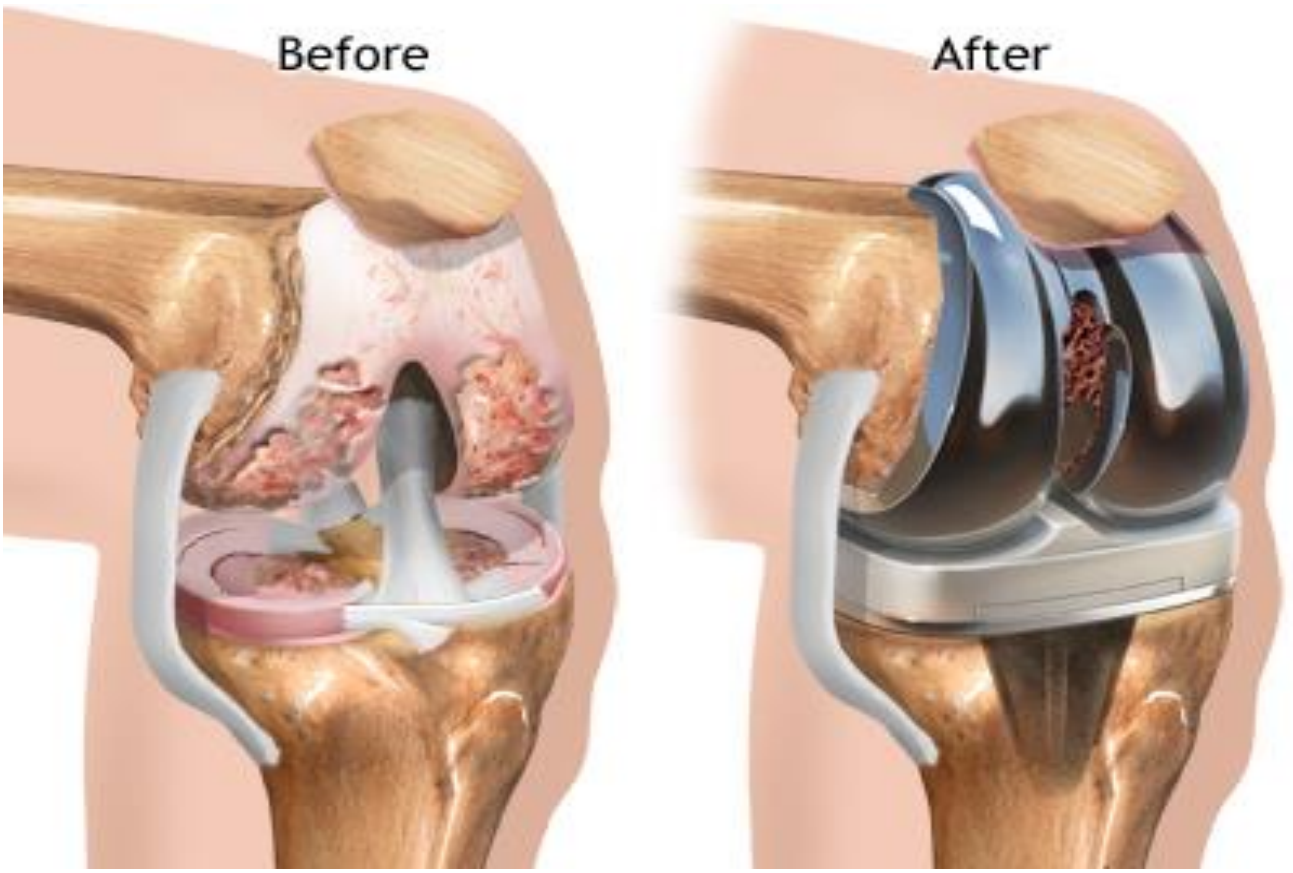


incorrect



**correct**

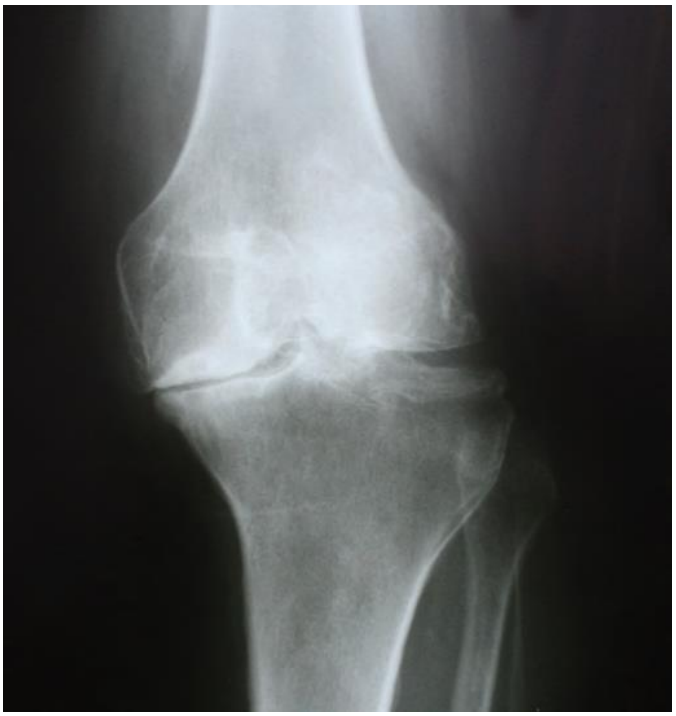
# Knee Replacement Surgery



# Understanding Knee Replacement

## Understanding Knee Replacement

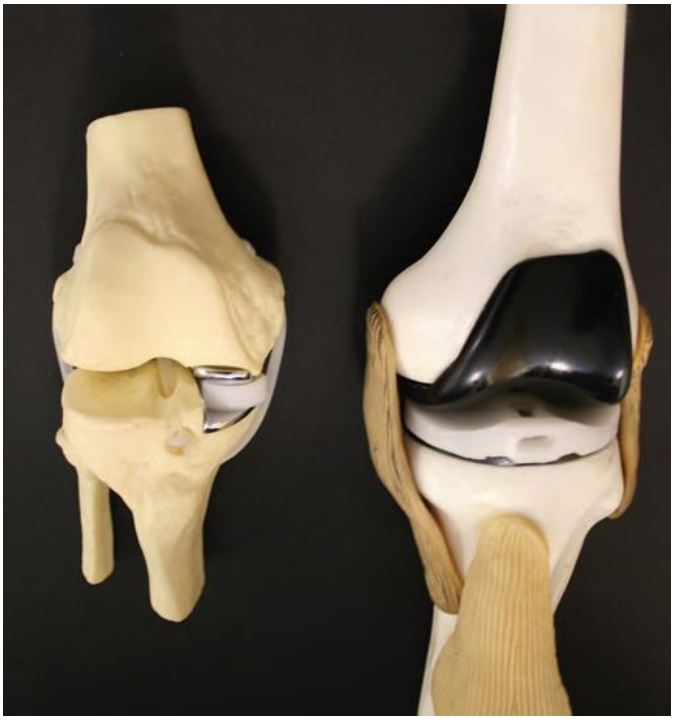
A knee joint requiring replacement has significant cartilage wear, possible bone deformity and decreased joint spacing. Movement is no longer pain-free and smooth. Joint stiffness and pain are frequent complaints due to the destruction of the cartilage, caused by injury or inflammation. As the cartilage is worn away, exposed bones rub on each other and cause pain.



X-Ray of diseased knee, arthritis, bone on-bone wear, loss of joint space, and bone deformity.

The x-ray shown here reveals loss of joint space, bony over-growth or spurring and deformity from loss of articular cartilage.

The placement of artificial components (joint replacement removes the damaged bony surface and replaces it with metal alloys and special plastics) helps to regain smooth, easy motion and provides greater comfort with movement.



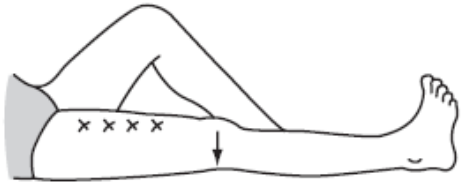
A) Partial or “Uni” compartmental knee replacement.
B) Total knee replacement.

# Total Knee Replacement Exercises:

- Start with 10 repetitions of each exercise and increase to 20 repetitions.
- Do all exercises AT LEAST 3 times per day.
- Do exercises slowly.

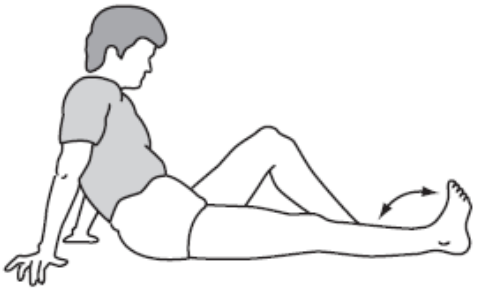
**Quad Sets**

- Press back of leg into bed; tighten the muscles on top of your thigh.
- Hold for 5 seconds and then relax.



**Ankle Pumps**

- Point toes towards foot of bed.
- Pull toes towards your head.

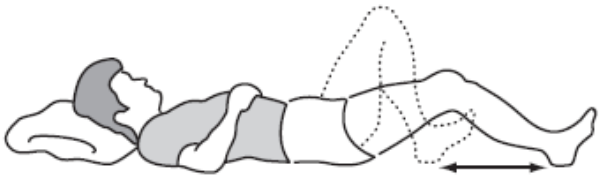


**Glut Sets**

- Squeeze your buttocks together as tightly as possible.
- Hold for 5 seconds and then relax.

**Heel Slides**

- Keep kneecaps pointed towards ceiling throughout exercise.
- Slide one foot towards your buttocks, bending your hip and knee.
- Slowly return to starting position.



# Spine Surgery

# Understanding Your Spine

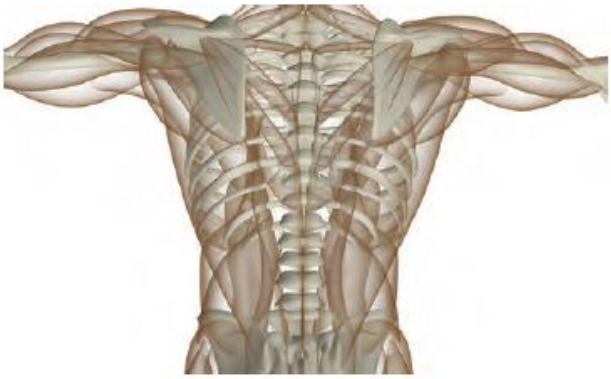
## Basic Anatomy

A healthy back allows you to bend and stretch without pain. The spine is made of bones (vertebrae) and pads of soft tissue (disks).

The spine has three natural curves: cervical (neck), thoracic (mid back), and lumbar (low back). When properly aligned, these curves keep your body balanced. They distribute your weight throughout your spine and also support your body when you move.

### Strong, Flexible Muscles

Strong, flexible back muscles support the spine and help maintain the three natural curves in proper alignment by holding the vertebrae and disks in proper alignment. Strong stomach, buttock, and thigh muscles also help to reduce strain on the back.



### Cushioning Disks

The disks cushion the bones of your spine and also play a role in back fitness. Disks are the soft pads of tissue between the vertebrae (bones). They absorb shock caused by movement. Each disk has a spongy center (nucleus) and a tougher outer ring (annulus). Movement within the nucleus allows the vertebrae to rock back and forth on the disks. This provides the flexibility needed to bend and move.

The Parts of the Spine

- The vertebrae are the 33 bones that make up the spine.
- The spinous process is the part of each vertebra you can feel through your skin in the center of your back.
- Each of these bones has a canal that runs top to bottom. Together these canals form a tunnel called the spinal canal.
- The lamina of each vertebra forms the back of the spinal canal.
- Running through the canal are nerves (the spinal cord).
- A foramen is a small opening where a nerve leaves the spinal canal.
- Disks serve as cushions between vertebrae. A disk's soft center absorbs shock during movement.

**Your Spine's Three Natural Curves**
The spine is arranged in three curves: cervical (neck), thoracic (midback), and lumbar (low back). When they are properly aligned, these curves support your weight comfortably. The curves are maintained when you are relaxed and your ears, shoulders, and hips are in a straight line. This is called a neutral position.

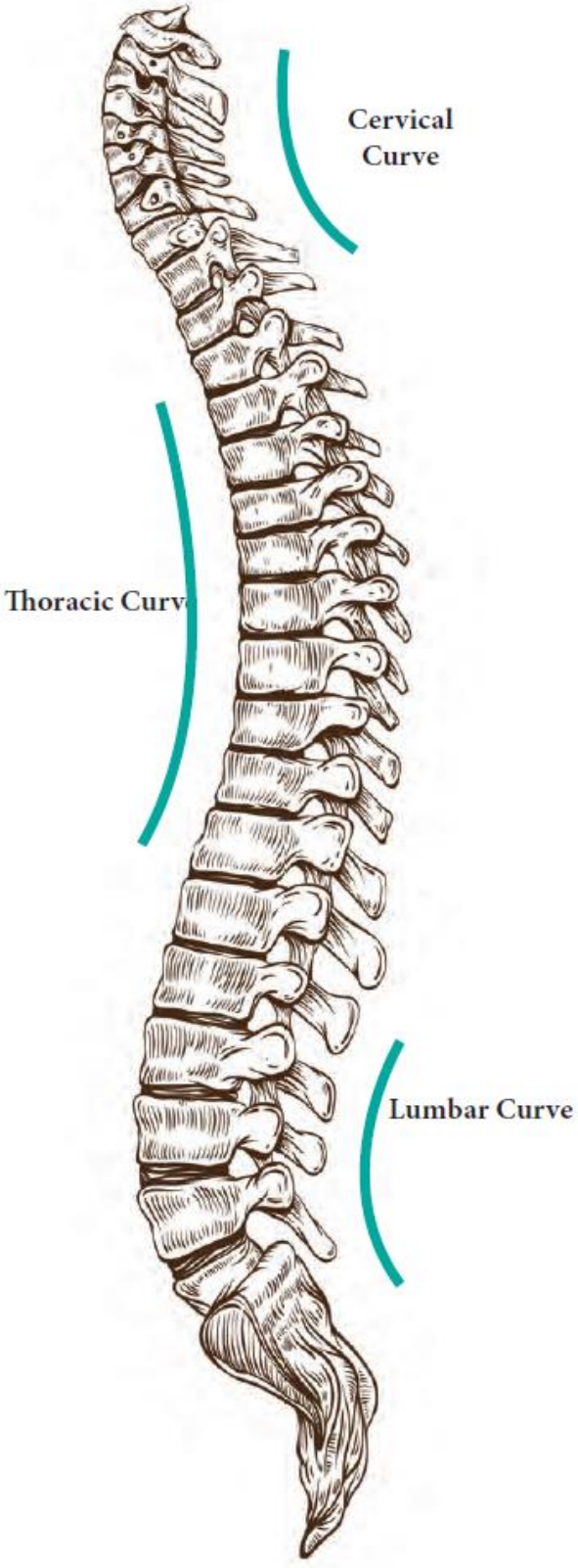
**The Cervical Curve**
The neck supports the head, keeping it aligned with the rest of your spine. When the seven neck bones, disks, and muscles are in good condition, they allow you to move your head freely and without pain.

The neck moves in three basic ways. During:

- Flexion and extension, the head moves forward and backward.
- Rotation, the head turns left and right.
- Lateral bending, the head tilts, ear toward the shoulder.

**The Thoracic Curve**
The thoracic region has 12 vertebrae and refers to the chest area.

**The Lumbar Curve**
The lumbar curve is the hardest-working part of the spine. These five vertebrae are larger than the thoracic and cervical vertebrae. They carry more weight and are the most flexible. Aligning this curve helps prevent damage to vertebrae, disks, and other parts of the spine.



## Causes of Neck or Back Pain

Back pain can be caused by problems with any part of the spine. For example, your neck needs to be strong to hold up your head, which may weigh more than 10 pounds. Injury, poor posture, wear and tear, and diseases such as arthritis can damage the structures (disk and bone) of your spine. You may have a family tendency to develop disk problems and smoking can contribute as well. Pain and weakness in your neck, arms, lower back or legs may be the end result.

### Disk Disease

Constant wear and tear on a disk can cause it to weaken and push outward (herniate) and press on a nerve. There are two common types of herniated disks:

- Contained herniated disk means the soft nucleus is protruding outward.
- Extruded herniated disk means the firm annulus has torn and the soft center is protruding through the tear.

### Pressure from Bone

As disks thin and wear out vertebrae can rub against each other or slip out of place. This can irritate facet joints and nerves. It can cause bone spurs (growths) where the bones rub together or may lead to stenosis (a narrowing of the spinal canal or foramen due to spur formation). Vertebrae that become unstable and slip forward are called spondylolisthesis. These conditions put pressure on the nerves.

### Spinal Fusion

Spinal fusion may be necessary to limit movement. This can be accomplished by implanting hardware or by doing a bone graft. The donor bone for a graft. The donor bone for a graft can come either from a bone bank or some other site on your body. If you are a candidate for a fusion, your surgeon will discuss the options with you.

### Extra Support

To help keep your spine steady and promote fusion, extra support may be used. Internally metal supports called instrumentation may be used, and this may include cages or plates, screws and rods. Externally this may include devices such as a cervical collar for the neck region or a back brace for the thoracic and lumbar region.

### Additional Spine Resources:

**North American Spine Society**
Provides patient education material online.
Exercise & Videos available.

Go to spine.org and click on the “know your back.org” link.

**Back Safety: Getting Into and Out of Bed**

Safety Tip: After you stand up, wait a moment before walking to be sure you're not dizzy. Good posture protects your back when you sit, stand, and walk. It is also important while getting into and out of bed. Follow the steps below to get out of bed. Reverse them to get into bed.

**1 Roll Onto Your Side**

- Keep your knees together.
- Flatten your stomach muscles to keep your back from arching.
- Put your hands on the bed in front of you.

**2 Raise Your Body**

- Push your upper body off the bed as you swing your legs to the floor.
- Keeping your back straight, move your whole body as one unit. Don't bend or twist at the waist.
- Let the weight of your legs help you move.

**3 Stand Up**

- Lean forward from your hip and roll onto the balls of your feet.
- Flatten your stomach muscles to keep your back from arching.
- Using your arm and leg muscles, push yourself to a standing position.

# Spine Exercises

- **Start with 10 repetitions of each exercise and increase to 20 repetitions.**
- **Do all exercises AT LEAST 3 times per day.**
- **Do exercises slowly.**

### Quad Sets

- Press back of leg into bed; tighten the muscles on top of your thigh.
- Hold for 5 seconds and then relax.


### Gluteal Sets

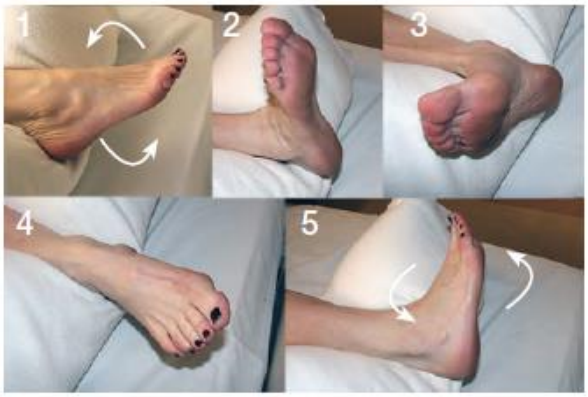
- Squeeze your buttocks together as tightly as possible.
- Hold for 5 seconds and then relax.


### Abdominal Bracing

- Lie on your back.
- Bend your knees up.
- Tighten your abdominal muscles by bringing your belly button in.
- Hold for 5 seconds and then relax.

### Ankle Circles

- Ankle circles
- Foot up/foot down



**Proper Body Mechanics**
Bend at hips and knees, not back.
Keep feet shoulder-width apart.

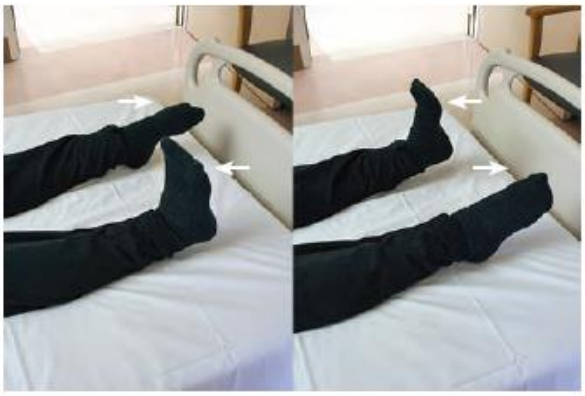

Squat down and bring item close to lift. If you have had spine surgery, DO NOT lift more than 10 lbs until cleared with your doctor.



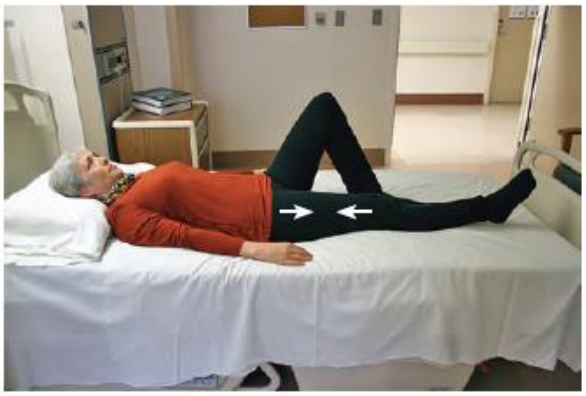
Squat to reach or rearrange your work area.
Avoid twisting and bending.


Avoid twisting or bending back. Pivot around using foot movements.

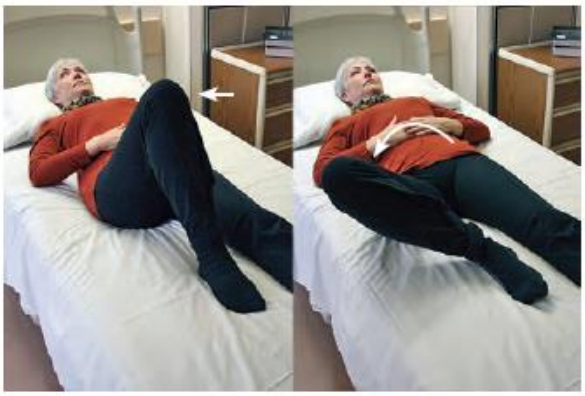
**Ankle Mobilization/Neural Glide**
With ___ leg elevated, gently flex and extend ankle. Move through full range of motion. Avoid pain. Repeat ___ times per set. Do ___ sets per session. Do ___ sessions per day.



**Knee Stabilization/Quad Set**
Slowly tighten muscles on thigh of straight leg while counting out loud to 10. Repeat with the other leg for set. Repeat ___ times per set. Do ___ sets per session. Do ___ sessions per day.



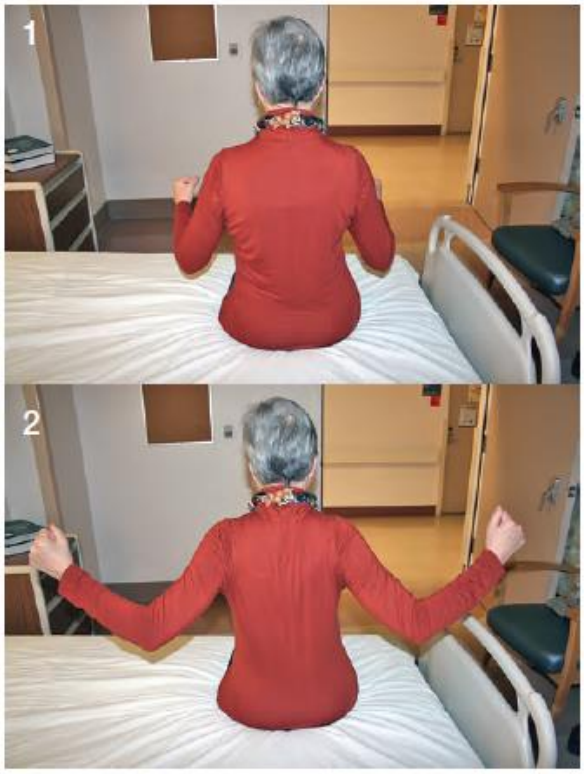
**Hip/Knee Abduction/Adduction Control**
With leg bent, gently lower knee to the side and return. Repeat ___ times per set. Do ___ sets per session. Do ___ sessions per day.



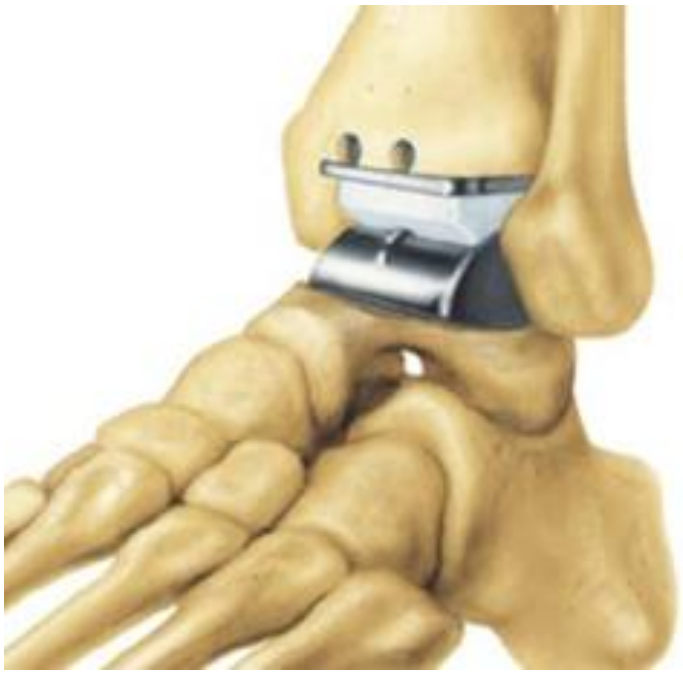
**Abdominal Bracing/Pelvic Stabilization**
With feet flat and knees bent, flatten lower back into bed. Tighten stomach muscles. Hold for ___ seconds. Repeat ___ times per set. Do ___ sets per session. Do ___ sessions per day.

**Hip/Knee Mobilization**
Slide ___ heel toward buttocks until a gentle stretch is felt. Hold ___ seconds. Relax. Repeat ___ times per set. Do ___ sets per session. Do ___ sessions per day.

**Seated Scapular Retraction**
With elbows bent to 90°, pinch shoulder blades together and rotate arms out, keeping elbows bent. Repeat ___ times per set. Do ___ sets per session. Do ___ sessions per day.



# Total Ankle Replacement Surgery



# Understanding Ankle Replacement

## Understanding Ankle Replacement

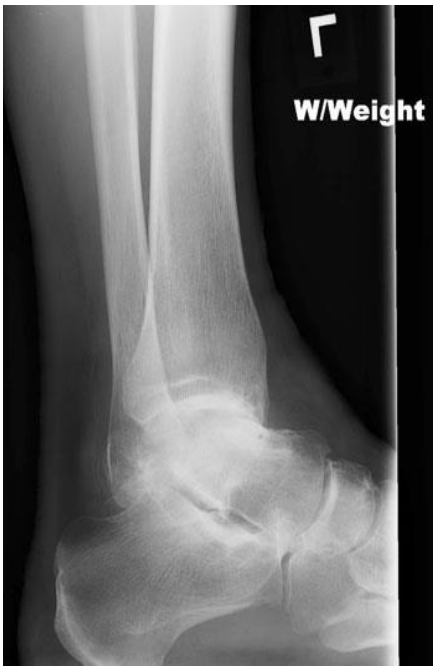
An ankle joint requiring replacement has significant cartilage wear, possible bone deformity and decreased joint space. Movement is no longer pain-free and smooth. Joint stiffness and pain are frequent complaints due to the destruction of the cartilage, caused by injury or inflammation. As the cartilage is worn away, exposed bones rub on each other and cause pain.

The x-ray shown here reveals loss of joint space and deformity from loss of articular cartilage.

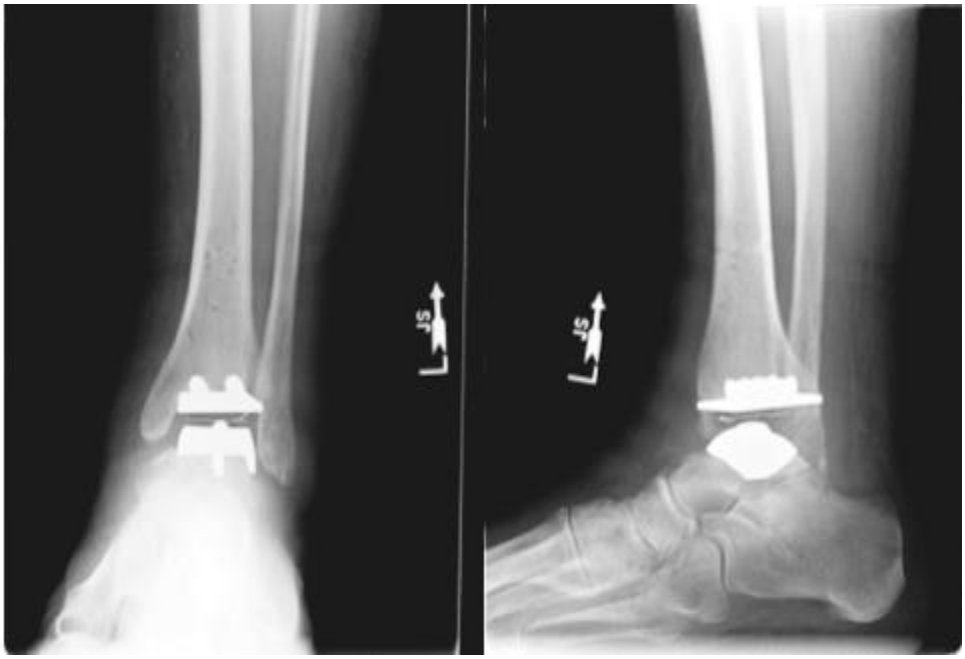
The placement of an ankle joint prosthesis removes the damaged bony surface and replaces it with metal alloys and special plastics to enable the ankle to regain smooth, easy motion and provides greater comfort with movement.

Postoperatively you will have a large bandage/splint on your operated ankle and you will not be allowed to bear weight on your operated leg for a minimum of 3 weeks following surgery. During this time you will need to use crutches, a walker or a Roll-About scooter while ambulating. It is a good idea to practice using the crutches, walker or Roll-About before surgery to make sure you can effectively and comfortably use the walking device without bearing weight on your operated ankle including going up and down stairs, walking on sloped surfaces and walking on uneven terrain.

During the first 2-3 weeks after surgery it is also important to elevate your operated foot above the level of your heart as much as possible to decrease the postoperative swelling thereby decreasing the tension on your incision site which improves the healing of your incision site.

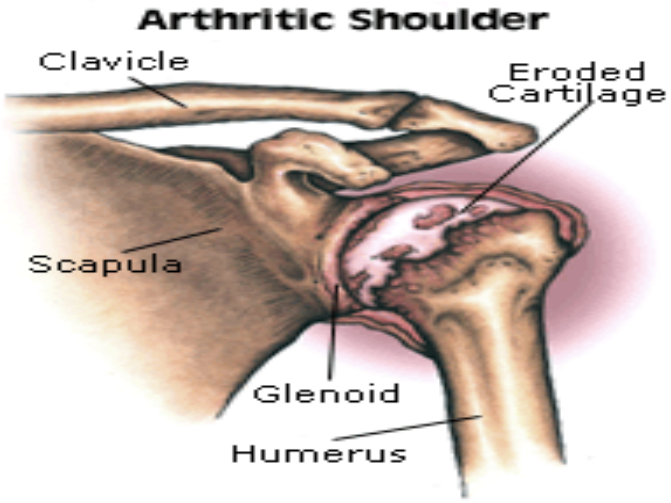


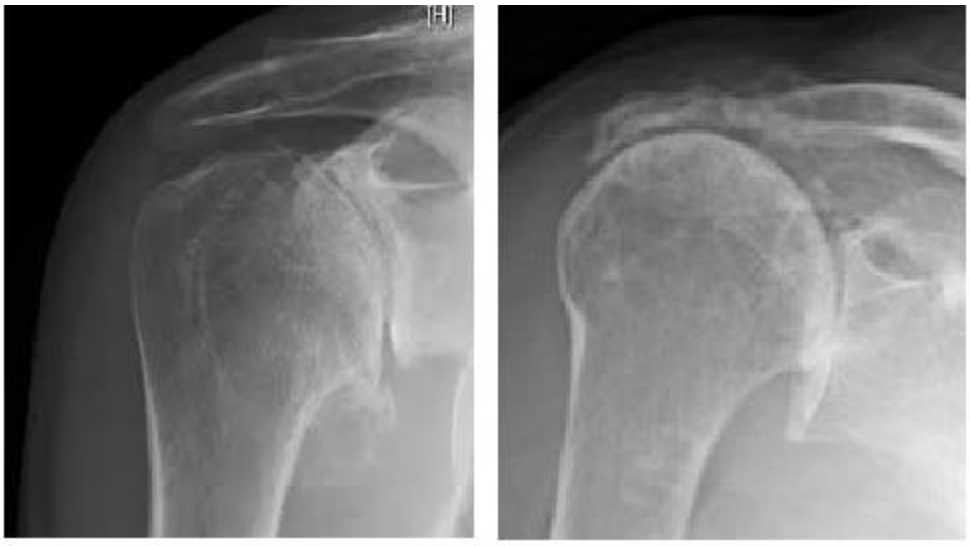

X-Ray of an arthritic ankle



X-rays of a total ankle replacement.

# Total Shoulder Replacement Surgery



X-ray of diseased shoulder, arthritis, bone-on-bone wear,
loss of joint space and bone deformity

# Understanding Shoulder Replacement

## Understanding Shoulder Replacement

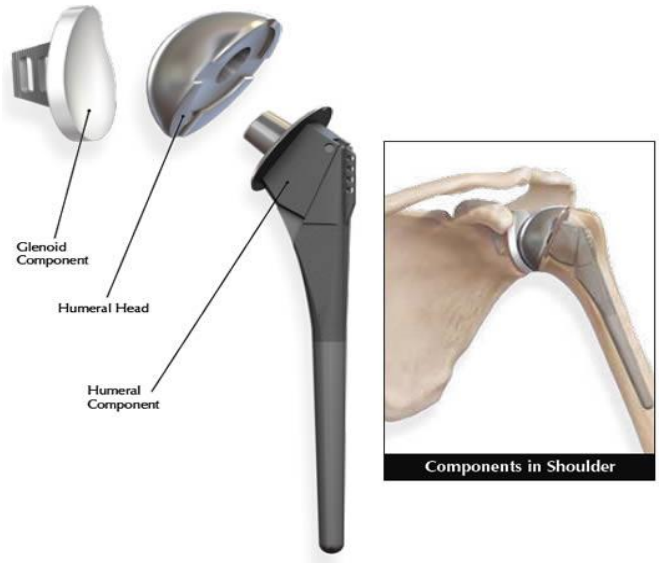
Your shoulder is the most flexible joint in your body. The ball, or head, of the humerus (arm bone) rests against the glenoid (a small shallow socket) which is part of the scapula (shoulder blade bone).

Bone and often soft tissue damage has occurred over time due to arthritis, injury or bone disease. This causes even simple movements to become painful and difficult. A disease or damaged shoulder is often swollen.

Your surgeon has determined what type of shoulder replacement is best for you based on your shoulder condition. Basically, there are three options:

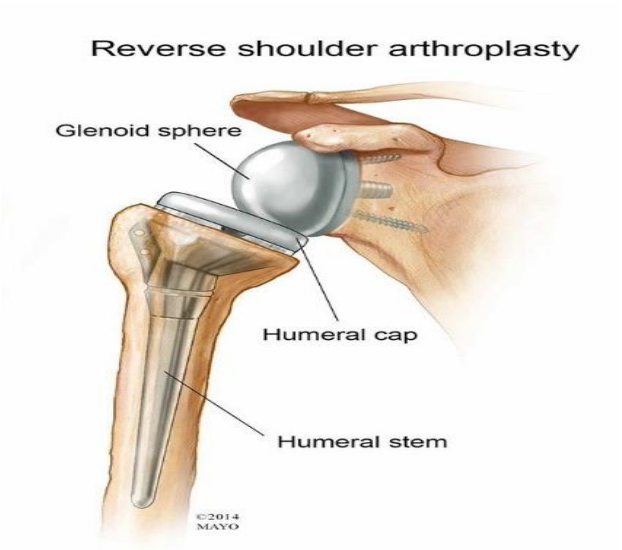
### 1. Traditional Shoulder Replacement:

The stemmed component is fitted into the humerus and a ball is attached. Think of an ice cream cone. A plastic shallow cup is placed into the glenoid to complete the ball-and-socket joint.



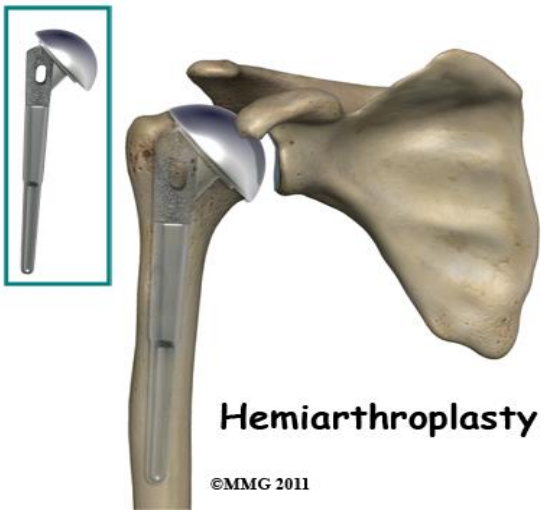

### 2. Reverse Total Shoulder Replacement:

A stem is placed in the humerus but the concave socket is attached at the tip. The round ball is then placed on the glenoid surface. This procedure is routinely used for a revision of a total shoulder or for some patients with massive, long term rotator cuff tears.




### 3. Hemi-Arthroplasty Shoulder Replacement:

Only the humeral component is replaced. A stem is fitted into the humerus and a ball is fitted at the top. The glenoid is usually not badly damaged by disease or injury and does not require replacement.

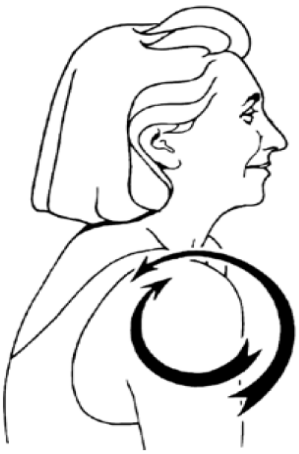


## Shoulder Replacement Exercises:

### PENDULUM

Let arm move in a circle clockwise, then counter-clockwise by rocking body weight in a circular pattern. Keep thumb pointed toward body rather than away.

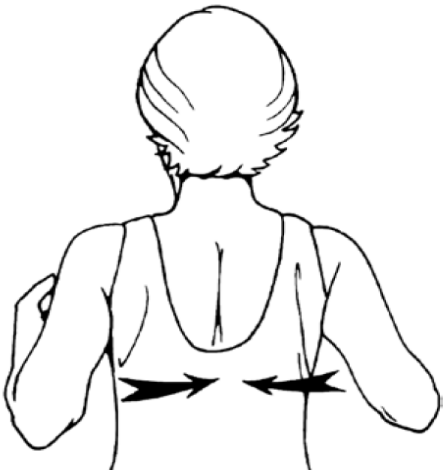
Repeat 10 times.
Do 2 sessions per day.



### SHOULDER CIRCLES

Slowly roll shoulders forward, making 5 five small circles. Then roll shoulders backward, making 5 small circles. This completes one set.

Do 2 sessions per day.



### SHOULDER BLADE SQUEEZES

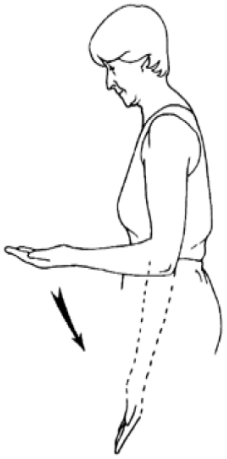
Pinch shoulder blades together. Hold for 5 seconds.

Repeat 10 times.
Do 2 sessions per day.

## FOREARM SUPINATION

Start with forearm on table palm facing down. Keep elbow at your side. Rotate forearm until palm faces up.

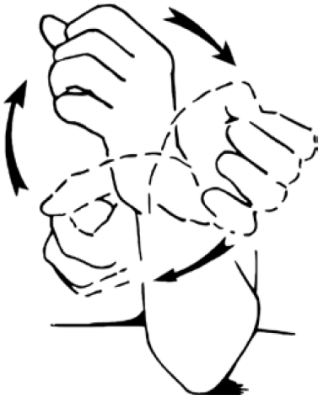
Repeat 10 times.
Do 2 sessions per day.



## ELBOW FLEXION

Bend and straighten your elbow.

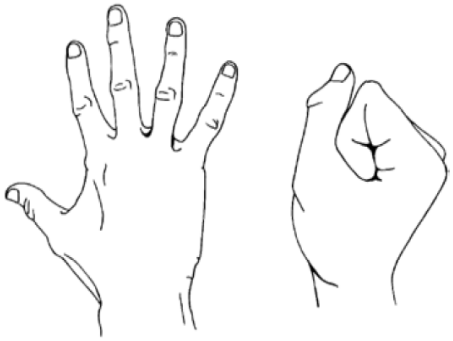
Repeat 10 times.
Do 2 sessions per day.



## WRIST CIRCLES

With fingers curled, slowly move wrist clockwise 5 times. Repeat 5 times counter-clockwise.

Do 2 sessions per day.



## HAND PUMPS

Spread fingers apart, and then make a fist.

Repeat 10 times.
Do 2 sessions per day.

## NECK FLEXION

Bend head forward and return to starting position.

Repeat 5 times.
Do 2 sessions per day.

## NECK ROTATION

Turn head slowly to look over one shoulder. Hold for 10 seconds. Then turn the other way and hold for 10 seconds.

Repeat 5 times.
Do 2 sessions per day.

## LATERAL NECK FLEXION

Tilt head slowly toward one shoulder. Hold for 10 seconds. Then the other way and hold for 10 seconds.

Repeat 5 times.
Do 2 sessions per day.

## Frequently Asked Questions

**Will the operation relieve my pain?**
**What are the benefits?**
The goal of surgery is to relieve pain, improve function and increase activities of daily living. You will have discomfort related to the surgery, but while hospitalized, you will be on a multi-modal pain control program. This pain should decrease as healing progresses. Your surgeon will prescribe pain medication. Benefits of the surgery vary depending upon the severity of the condition, general health and activity level prior to surgery, and with your ability to carry out the instructions after surgery.

**How long is the surgery?**
The surgery time can range from 1.5 hours to several hours. Length of time will be dependent on many factors including the type of surgery you are having.

**How soon will I get out of bed?**
**When can I use the toilet or commode?**
Depending on your physician's orders, you will be assisted to sit at the edge of the bed and helped out of bed the day of surgery. Early mobilization is the best defense to prevent complications after surgery. Your physical therapist, occupational therapist or nurse will help you walk to the bathroom as your medical condition allows and you will continue to be assisted by the therapists or nursing staff as needed.

**How long will I be in the hospital?**
You can expect to be in the hospital approximately 1-2 days following surgery.

**Can my family and Orthopedic Coach visit me in the hospital?**
Yes, there are no limitations for families or your Orthopedic Coach visiting you in the hospital. Selecting an Orthopedic Coach is strongly encouraged. This person should attend all preoperative appointments, be present for at least one physical therapy session in the hospital, participate in your hospital teaching and care and be present at the time of your discharge from the hospital so that he/she is comfortable with the instructions for your recovery at home. Your Orthopedic Coach and your family will be a strong support system for you at home and are key to a successful recovery.

**Will I be able to return to my home directly from the hospital?**
Our goal is for all patients to return home directly after the 1-2 day hospital stay. We encourage your Orthopedic Coach, family or friends to help you for 1-2 weeks following your discharge home. Our Case Manager will work with you and your family to confirm your discharge plans.

**What kind of assistance will be needed?**
Initially you may need help with cooking, housework, shopping, laundry, bathing and transportation. Ask your Orthopedic Coach, friends and family to coordinate a scheduled to provide you with the assistance and care you will need at home. In addition, you may also want to arrange for home care from a private home care agency.

**What else can I do to improve my recovery?**
Stop smoking. Smoking can slow healing and make you more prone to infection. Resources to help you quit smoking are listed in this education binder.

Avoid excessive consumption of alcoholic beverage which may interfere with medications and increase safety risks.

Eat a nutritious diet and drink plenty of water. This promotes wound healing and decreases the risk of constipation.

Follow all of your surgeon's instructions.

**Should I exercise before the surgery?**
Yes, keeping your muscles "fit" will promote a better and faster recovery. You may consider one or more of the following:

- Ask your surgeon to refer you to our Prehab Program to increase your cardiovascular strength, endurance, balance and learn the

exercises you will be asked to do postoperatively.
- Continue the exercises you have learned from your physical therapist.
- Start doing the exercises in this packet at home prior to your surgery.
- Continue your routine exercise program.

**Will my insurance pay for help at home?**

Talk with a representative from your insurance health plan prior to your hospitalization to explore and understand your benefits. The Case Manager will assist you during your stay in the hospital with home care and equipment needs.

**What equipment is typically covered by most insurance plans?**

Insurance coverage is variable. Sometimes prior authorization is required, sometimes you may have a copay and sometimes the recommend item is not a covered benefit under your plan. The Case Manager will be able to help you to determine what items are covered by your plan; however, if you know prior to your hospitalization that you will need a certain piece of adaptive equipment it is a good idea to obtain the item prior to the hospitalization. After surgery, the physical and occupational therapist will make recommendations for any equipment that they feel you would benefit from having at home. Some of these items may be purchased at the hospital gift shop and others can be arranged by your case manager.

**How will I get in and out of a car after surgery?**

Prior to discharge, the therapist will show you ways to get in and out of a car.

**When can I shower?**

Some surgeons allow their patients to shower as soon as 2 to 3 days after surgery if a water resistant dressing is used. If a water proof dressing is not used, your surgeon will likely allow you to shower when the wound is closed and no longer draining. You will also need to be safe entering and exiting the shower area with assistance. Please ask your surgeon to clarify with you when you are permitted to shower.

**How long can I safely sit in a chair or car?**

One should never sit still for longer than 2 hours without getting up and exercising. Long periods of immobility increase the risk of blood clots in the legs and other complications. In addition, stiffness becomes painful. Your surgeon may limit sitting activities. Please ask your surgeon.

**When can I resume recreational activities?**

In most cases you are encouraged to participate in low impact activities such as walking, swimming and golf putting fairly early in recovery at the discretion of your surgeon (around 2 to 3 months).

**Will I have any restrictions on airplane travel?**

This will depend on several factors. You should discuss your plans with your surgeon prior to surgery, if possible. If you have had a joint replacement, you should not plan to travel on an airplane for at least 6 weeks following your surgery.

*Following posterior hip replacement:* Sit on pillows to elevate your seat and avoid using the cramped airplane bathrooms.

## Additional Frequently Asked Questions Following Total Hip Replacement Surgery

**How long will I need the use of a walker, crutches or cane?**
Typically individuals recuperating from total hip replacement use assistive devices for 2 or 8 weeks, or as long as the doctor or therapist recommends for safety. Walkers are safer than crutches and crutches are safer than canes.

**What will happen if I put more weight than allowed on my leg?**
Most surgeons allow weight bearing as tolerated. However, at times your surgeon may limit your weight bearing based on a number of factors. If your weight bearing is limited, you may cause damage or experience increased pain if you exceed your doctor's recommendations.

**Following a posterior total hip replacement, how long do I need to adhere to the precautions? How do I put on and tie my shoes? When can I cross my legs?**
Your surgeon will determine how long precautions must be followed, or if you can safely resume all previous activities. Initially, you will be given adaptive equipment and instructions to help you accomplish these tasks.

**Will my leg be shorter or longer?**
You may experience a difference in leg length. This usually disappears as you adjust to your "new" hip. Occasionally a shoe lift is needed. Discuss this with your surgeon.

**How soon can I drive or use a clutch with the operated leg?**
Typically, 4 to 8 weeks after the operation AND when your physician clears you for driving. You can use a clutch if you have adequate range of motion, strength and you are allowed to bear full weight on the operated leg. You will not be allowed to drive while taking prescription pain medications; this is considered "driving under the influence."

## Additional Frequently Asked Questions Following Total Knee Replacement Surgery

**How long will I need the use of a walker, crutches or cane?**
Typically individuals recuperating from total knee replacement use assistive devices for 6 or 8 weeks, or as long as the doctor or therapist recommends for safety. Walkers are safer than crutches and crutches are safer than canes.

**What will happen if I put more weight than allowed on my leg?**
Most surgeons allow weight bearing as tolerated. However, at times your surgeon may limit your weight bearing based on a number of factors. If your weight bearing is limited, you may cause damage or experience increased pain if you exceed your doctor's recommendations.

**Will I be able to kneel after my knee replacement?**
The majority of people do have difficulty kneeling on their operated knee following a knee replacement; however, some people are able to eventually kneel without difficulty. Many people are able to kneel for a short period of time, but do find it uncomfortable.

**How soon can I drive or use a clutch with the operated leg?**
Typically, 4 to 8 weeks after the operation AND when your physician clears you for driving. You can use a clutch if you have adequate range-of-motion, strength and you are allowed to bear full weight on the operated leg. You will not be allowed to drive while taking prescription pain medications; this is considered "driving under the influence."

**What is involved in a knee replacement surgery?**
The procedure for knee replacements typically requires making an incision down the front of the knee. This allows the surgeon to fully see the joint with the diseased bone. During the operation the arthritic portion of the lower end of thigh bone (femur), the upper end of the lower leg bone (tibia) and the undersurface of the knee cap (patella) are removed. The affected areas are replaced with implants on the bone ends and the underside of the

knee cap. This results in a smooth surface for joint movement.

**What does the minimally invasive total knee replacement involve?**
Instruments and equipment specifically designed for minimally invasive knee replacement allow a physician to perform the surgery with a smaller incision than typically done with traditional knee replacement surgery. Your surgeon will decide if this type of procedure is appropriate for you.

**What is the difference between a unicompartmental versus a total knee replacement?**
A unicompartmental knee replacement means that only one compartment of the knee joint is being replaced. It is most commonly the medial (inside) compartment, but may also be the lateral (outside) or the patellofemoral compartment (knee cap and groove). A total knee replacement means that all three compartments are being replaced (ie. medial, lateral and patellofemoral). Your surgeon will determine which surgery is most appropriate for you.

**I have heard that my kneecap will be numb, is that true?**
Numbness along the incision or below the knee cap may be experienced. It often resolves over time, but can be permanent.

## Additional Frequently Asked Questions Following Total Ankle Replacement Surgery

**How long will I need the use of a walker, crutches or cane?**
You will be non-weight bearing for the first 3 weeks after surgery during which time you will need to use either a walker, crutches or scooter. Typically individuals recuperating from total ankle replacement use assistive devices for 6 or 12 weeks, or as long as the doctor or therapist recommends for safety. Walkers are safer than crutches and crutches are safer than canes.

## Additional Frequently Asked Questions Following Total Shoulder Replacement Surgery

**Will I be able to do more?**
After shoulder replacement you can look forward to less pain and stiffness with improved strength and movement. How much strength and movement you regain may depend on your specific shoulder problem. If the muscles and other soft tissue structures are healthy, your shoulder may be stronger and more flexible. Work diligently and follow instructions from your therapist and your surgeon.

**When can I drive a car?**
You may not operate a motor vehicle while you are taking pain medications. This is a safety concern for yourself and for others. Muscles in your arm are not strong enough and should not be used for driving for several weeks. Please ask your surgeon when you will be safe to drive.

## Additional Resources

### Alta Bates Summit Medical Center
www.altabatessummit.org

**Alta Bates Campus**
2450 Ashby Ave
Berkeley, CA 94705
(510) 204-4444

**Summit Campus**
350 Hawthorne Ave
Oakland, CA 94609
(510) 655-4000

**Health Pavilion** (Outpatient Services)
5700 Telegraph Ave, 2nd floor
Oakland, CA 94609
(510) 204-1788
www.altabatessummit.org

**Jackson Orthopaedic Foundation**
A local non-profit education, research, and patient outreach center.
3232 Elm St, Suite 2
Oakland, CA 94609
(510) 238-4851
www.jacksonortho.org

**EDHEADS**
A non-profit corporation providing educational online experience, including actual surgical pictures.
www.edheads.org

**Other Helpful Websites**

- All About Arthritis
  www.allaboutarthritis.com
- Arthritis Foundation
  www.arthritis.org
- American Academy of Orthopedic Surgery
  www.orthoinfo.org
- American Association of Hip and Knee Surgeons
  www.aahks.org
- American Orthopedic Society for Sports Medicine
  www.sportsmed.org
- American Academy of Orthopedic Surgeons
  www.aaos.org
- Medline Plus National Institutes of Health
  www.medlineplus.gov
- United States Bone and Joint Decade
  www.usbjd.org

## Alta Bates Summit Campus Locations

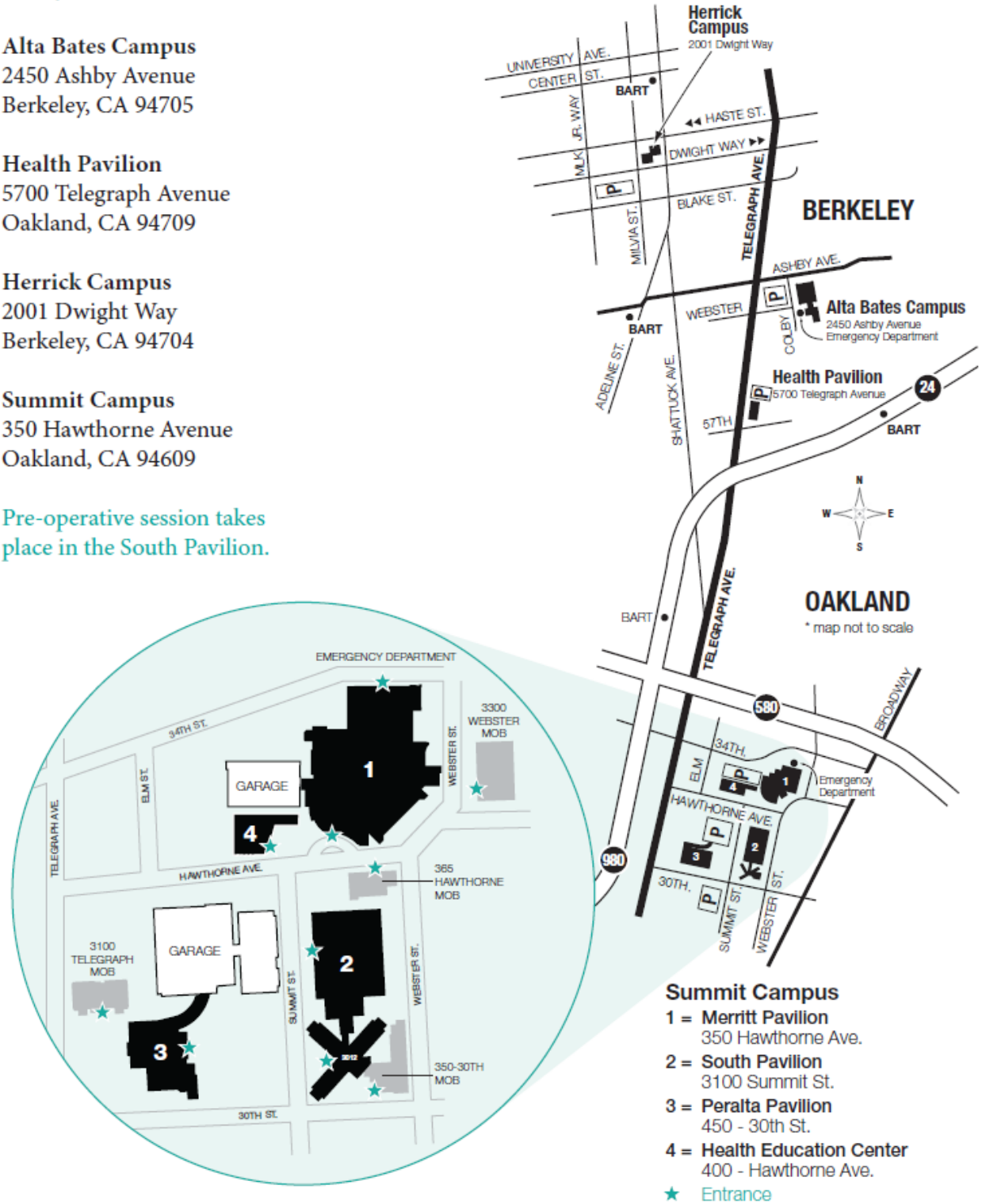
**Alta Bates Campus**
2450 Ashby Avenue
Berkeley, CA 94705

**Health Pavilion**
5700 Telegraph Avenue
Oakland, CA 94709

**Herrick Campus**
2001 Dwight Way
Berkeley, CA 94704

**Summit Campus**
350 Hawthorne Avenue
Oakland, CA 94609

Pre-operative session takes place in the South Pavilion.



## Notes and Questions

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